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ABSTRACT

The mathematics curriculum activities presented in this guide were developed as one component of a total career education demonstration project for Appalachian Maryland, and are intended for use as supplements to the total middle or junior high school curriculum. Introductory material lists career education concepts and outlines career and occupational development objectives. The body of the guide consists of sixteen mathematics units covering the following areas: whole numbers, numeral systems, fractions, decimals, ratios and proportions, percent, integers, graphing, plane and solid geometry, measurement, finding the perimeter, finding areas, computing volume, the metric system, story problems, and computing probability. Each unit relates career education activities to one or more concepts within the unit area. Career education activities are identified according to type of activity (e.g., student project, research, mathematical problems, discussion, resource materials). Materials required for many of the activities are appended. (SH)

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Career Education in Appalachian Maryland

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INVESTIGATION AND DECISION MAKING

MATHEMATICS

MIDDLE OR
JUNIOR HIGH SCHOOL
SUPPLEMENTAL ACTIVITIES

OE 011 879

The supplemental curriculum activities developed under this demonstration project make up one component of a total Career Education Demonstration Project for Appalachian Maryland.

Although the infusion of this material into curriculum areas is felt to be most important, we are not suggesting that these materials be used as texts. This material, when used supplementally, should add greatly to our total education curriculum.

In his position paper, "An Introduction to Career Education", Kenneth B. Hoyt, Associate Commissioner for Career Education at the United States Office of Education, stated "If students can see clear relationships between what they are being asked to learn in school and the world of work, they will be motivated to learn more in school.

"There exists no single learning strategy that can be said to be best for all students. Some students will learn best by reading out of books for example, and others will learn best by combining reading with other kinds of learning activities. A comprehensive educational program should provide a series of alternative learning strategies and learning environments for students.

"Basic academic skills, a personally meaningful set of work values, and good work habits represent adaptability tools needed by all persons who choose to work in today's rapidly changing occupational society."

I feel that the material developed by this very competent and industrious task force does provide alternate learning strategies for students. I have seen many of these activities tried enthusiastically by teachers and received in the same manner by students.

Certainly, we do not feel that this material should remain in this form forever. I suggest to the educators who choose to use these activities that they change, critique, and create far beyond what they find printed here.

James W. Wilson

James W. Wilson, Director
Career Education Project

TRI-COUNTY CAREER EDUCATION TASK FORCE

Allegany, Garrett, and Washington Counties

Career Education Concepts

1. Careers are interdependent and should benefit society.
2. People work for rewards and satisfaction.
3. There are rules for all kinds of work.
4. Attitudes and personality factors have an effect on work, performance, and success.
5. Work has dignity and is worthwhile.
6. All work involves the production of either goods or services.
7. Most kinds of work require some skill or training.
8. People should contribute their particular talents and capabilities to the world of work.
9. People should adapt to technological and sociological changes which create or eliminate work.
10. Environmental and cultural factors determine the kinds of work available.
11. People's work affects their way of life.

SUMMARY OF

CAREER AND OCCUPATIONAL DEVELOPMENT OBJECTIVES

I. Prepare for making career decisions

- A. Know own characteristics relevant to career decisions
- B. Know the characteristics and requirements of different careers and occupations
- C. Relate own personal characteristics to occupational requirements
- D. Plan for career development or change

II. Improve career and occupational capabilities

III. Possess skills that are generally useful in the world of work

- A. Have generally useful numerical skills
- B. Have generally useful communication skills
- C. Have generally useful manual-perceptual skills
- D. Have generally useful information-processing and decision-making skills
- E. Have generally useful interpersonal skills
- F. Have employment-seeking skills

IV. Practice effective work habits

- A. Assume responsibility for own behavior
- B. Plan work
- C. Use initiative and ingenuity to fulfill responsibilities
- D. Adapt to varied conditions
- E. Maintain good health and grooming

V. Have positive attitudes toward work

- A. Recognize the bases of various attitudes toward work
- B. Hold competence and excellence in high regard
- C. Seek personal fulfillment through own achievements
- D. Value work in terms of societal goals

Taken from: National Assessment of Educational Progress, 1971; J. Stanley Ahmann, Staff Director and James A. Hazlett, Administrative Director

CAREER ACTIVITIES

MATH IN THE WORLD OF WORK

Joe Byers
Jon Gaver
Mary Johnson
Don Lloyd
Brenda Mullendore

Introduction

One of the best methods of motivacing students in the field of Mathematics is to correlate the lesson to some practical application such as the World of Work.

The purpose of the following activities is to supplement the curriculum with experiences which will give the student insight into careers. We attempted to suggest as many activities as possible for each lesson.

Although we have specified a level for each activity, this is merely a suggestion to simplify your selection of material that is compatible with your students' abilities.

Jue Byers
Jon Gaver
Mary Johnson
Don Lloyd
Brenda Mullendore

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UNIT: **Whole Numbers**

CONCEPT: **Addition and subtraction are important in buying and selling situations**

Career Education Activity	Activity Evaluation/Comments
PROBLEM - Suppose you were buying a car. Look over the money amounts in each case. Case I. A 4-door car has a retail price of $4875. In a straight cash sale, a discount of $350 is offered. You can sell your old car for $1000. Case II. The same car has a retail price of $4875. Without a discount you can trade your car for a difference of $3600. Which would be the preferable deal? ROLE PLAY - Encourage students to bring in the classified sections of newspapers. 1. Create hypothetical buying and selling situations. 2. Role play buyer and salesman. 3. Make transparency of different car prices and compare. RESOURCE PERSON - Invite a car salesman in to talk to the class about car prices- base price, options, sale prices, depreciation. RESOURCE MATERIALS - 1. Students or teachers may wish to write to the following organizations for free literature on automobile salesmen- A. National Automobile Dealers Assoc.- Public Relations Dept. 2000 K St., N.W., Washington D.C. 20006 (Your Career in the Retail Auto Industry B. General Motors Corporation Public Relations Staff, Detroit, Mich. 48202. (Professional Profile of an Automobile Salesman). 2. Chronicle Guidance Publications A. Automotive body repairman B. Automobile mechanic	

UNIT: Whole Numbers

CONCEPT: Whole numbers are important in transportation.

Career Education Activity	Activity Evaluation/Comments

PROBLEM - A truck driver has to make a delivery in New York City. He has 5 possible routes, all different in mileage and average speed.

Route	Mileage	Max. Speed Limit
A	278	60
B	290	70
C	265	55
D	280	65
E	275	50

Have the student compute which route was fastest, assuming that the average speed was the same as the maximum speed limit allowed for that particular route. Then have the class discuss what other factors are involved in choosing routes (tolls, mountains), How would each of these factors affect your choice of routes?

RESOURCE PERSON - Have a truck driver visit the class and talk about his job.

COMMITTEE REPORTS - Form a committee of students to investigate the types of jobs in each mode of transportation-trucking, air, rail.

ROLE PLAY - Have student assume they are a businessman who wishes to hire a truck driver. Have them write a Want Ad to advertise for the job.

RESOURCE MATERIAL - For information you may sent to-

a. American Trucking Assoc., Education Section, Public Relations Dept., 1616 P. St., N.W., Wash. D.C. 20036 (On the Road With Truckers)
b. National Association of Motor Bus Owners, 839 17th St., N.W. Wash. D.C. 20006 (Bus Facts)
c. Association of American Railroads-Public Relations Dept. American Railroad Bldg., Wash. D.C. 20036 (The Human Side of Railroading)

UNIT: Whole Numbers

CONCEPT: Addition and subtraction are important in the area of transportation.

Career Education Activity	Activity Evaluation/Comments
RESEARCH - Encourage students to obtain travel folders or mileage charts from travel services, such as the bus terminals, travel agencies, or State Road Commission. 1. Have students find the shortest route to a given destination. How much mileage is involved in a round trip? 2. Plot an alternative route. How much difference is there in total mileage? COLLECTING DATA - Have students make up an expense log. Discuss some standard expenses with the class (13 miles per gallon of gasoline, 1 quart oil every 900 miles) and compute the expense log on these standard costs. RESEARCH - Students may write to local bus terminals, trucking firms, and railroad companies to obtain information. RESOURCE MATERIALS 1. Free publications may be obtained by writing to A. American Trucking Association-Education Section; Public Relations Dept., 1616 P St. N.W. Wash. D.C. 20036 (On the Road with the Truckers) B. National Association of Motor Bus Owners - 839 17th St. N.W. Washington, D.C. 20006 (Bus Facts) C. Association of American Railroads-Public Relations Dept., American Railroads Bldg., Washington, D.C. 20036 (The Human Side of Railroading.) 2. Chronicle Guidance Publications a. Powered industrial truck operator. b. On the road with the truckers. c. Bus driver d. Brakeman (railroad transportation) e. Railroad transportation industry.	

UNIT: Whole Numbers

CONCEPT: Whole numbers are important in making business decisions.

Career Education Activity	Activity Evaluation/Comments

STUDENT PROJECTS -

1. Ask your family service station manager how much fuel he sells in a given month. Record the number of gallons of regular, premium, and diesel fuel sold during that month.

2. Complete the following chart.

Cost per gallon	Number of Gallons	Premium	Regular	Diesel
1st day				
2nd day				
3rd day				
7th				
8th				
9th				
10th				
11th				
12th				

3. How many gallons of each type of fuel or gas did the station manager sell during your inventory period? How much profit is on each gallon? What was the total profit? What expenses must be paid before a profit is considered?

UNIT: **Whole Numbers**

CONCEPT: **Whole numbers are important in making business decisions.**

Career Education Activity	Activity Evaluation/Comments
4. How big are the station's fuel tanks? How often were they filled during your inventory period? 5. How big is the fuel tank of a small car? A large car? A small truck (pickup)? A large truck (dump or larger)? 6. What kind of fuel does a school bus use? A large coach bus? How many gallons will each hold? How much will it cost to fill these tanks? 7. How much will 15 gallons of premium gas cost? 15 gallons of regular? 15 gallons of diesel? 8. How many gallons of diesel fuel can you buy for the cost of 15 gallons of premium gasoline? 9. What is a dipstick? Give an example of how it is used. Note: This activity requires the cooperation of a gas station manager.	

UNIT: Whole Numbers

CONCEPT: Whole numbers are important in manufacturing.

Career Education Activity	Activity Evaluation/Comments

PROBLEM - Bill Martin works as a machinist in a local manufacturing plant. His job is to make parts on his machine for truck engines. He is required to make the following parts each day-

Part	Quantity
Piston	14
Bearing	10
Valve	12
Gear	5
Piston ring	7

A. Total number of parts per day?
B. Total number of parts in 2 days?
C. Number of pistons in 5 days?
D. By noon, Bill had made 8 pistons, 6 bearings, 2 valves, 3 gears, and 1 piston ring. How many parts does he have to make in the afternoon?

RESOURCE PERSON - Perhaps a parent who works in industry could visit the class and discuss his job.

ROLE PLAY - Have students role play an assembly line situation. A group of students can fold paper or make drawings where each member has only one responsibility. Particular attention should be given to the attitudes of the worker and the satisfaction derived from repeated tasks. Would a person whose job is to make individual parts have a different attitude toward his work?

STUDENT PROJECT - Have students write a Want Ad advertising for a person to operate a machine.

RESOURCE - Free publications may be obtained by writing to
A. General Motors, Public Relations Staff, Detroit, Michigan 48202 (Machinist, die maker)
B. U.S. Civil Service Commission, Washington, D.C. 21415

UNIT: Whole Numbers

CONCEPT: Whole numbers are important in the operation of a business.

Career Education Activity	Activity Evaluation/Comments

PROBLEM - Inventory is an important part of business. It is necessary for businesses to have a continued supply of materials in stock.

The inventory for the Family Restaurant - June 30 is as follows:

Item	Amt. on Hand Jan. 1	Present Supply	Supply Used
Napkins	200 boxes	37 boxes	?
Sugar	400 lbs.	82 lbs.	?
Straws	200	?	100 boxes
Salt	75 lb.	?	46 lb.
Placemats	?	247	1528
Glasses	10 doz.	7 doz.	?
Pepper	?	23 lb.	12 lb.

CHART - Have students make a chart on other items needed in the restaurant's inventory.

RESOURCE PERSON - Have a student or a resource person bring in an inventory sheet used by a business.

INTERVIEW - Have students talk with school personnel (cooks, janitors, principal, secretary) concerning inventories of school supplies.

RESEARCH - Have students make an inventory of materials within the classroom.

DISCUSSION - Class Discussion-Consequences of over-ordering or under-ordering a particular item to be sold in a business. What personal qualifications should the individual in charge of inventory have?

STUDENT PROJECT - Have students write a Want Ad advertising for a person in charge of inventory.

UNIT: Whole Numbers

CONCEPT: Whole numbers are important in business - quantity buying.

Career Education Activity	Activity Evaluation/Comments

PROBLEM - All large corporations have a purchasing agent whose duty is to purchase supplies for the business. Usually, the corporation saves by buying large quantities. For example:

An appliance store wants to add to its stock. They may buy at the following prices -

Item	Unit Price	Price of each for 10-24	Price of each for 25 or more
Television	$295	$275	$250
Stove	$305	$290	$275

A. What is the price of 10 TV's at the unit price? What is the price of 10 TV's at the quantity price?
B. What is the price of 20 TV's at the quantity price?
C. What are the advantages and disadvantages of quantity buying?
D. Which costs more to buy-24 stoves or 25?

ROLE PLAY - Have the class role play the following jobs-
wholesale distributor
purchasing agent
salesman
customer

DISCUSSION - If a person wishes to enter a career involving buying and selling, what subjects in school will be most important? Why?

RESOURCE MATERIALS - Free publications
A. National Association of Purchasing Management, 11 Park Place, New York, N.Y. 10007 (Purchasing as a Career)
B. National Association of Wholesalers 1725 K St., N.W., Wash. D.C. 20006 (Career Opportunities in Wholesaling)

UNIT: **Whole Numbers**

CONCEPT: **Whole numbers are important in operating the family budget.**

Career Education Activity	Activity Evaluation/Comments

PROBLEM - Family income of $500 a month for parents and 2 children.
Expenses include-

Housing	$125
Food	$100
Clothing	$ 35
Transportation	$100
Recreation	$ 20
Medical expenses	$ 20
Utilities	$ 50
Insurance	$ 25
Savings	$ 25

A. How much does the family spend per month on:
   (1) Housing, food, transportation, utilities?
   (2) Clothing, recreation, medical expenses, insurance, and savings?
B. How much more is spent on transportation than on savings?
C. Which is more-money spent for housing and transportation or the remainder of the budget?

STUDENT PROJECT - Introduce budget in a manner similar to above.
A. Ask students to formulate a budget for a family of 4 with an income of $500 per month.
B. Enumerate additional expenses so that the amount spent would exceed the $500 income. Have students adjust expenses so that income and expenses match.
C. Students could role-play family members as they are deciding what areas must be cut in order to meet the budget.

REPORT - Have students report on the need for a budget in a family or business.

DISCUSSION - Discuss what actions must be taken by businesses when expenses exceed income-lay off workers, raise prices.

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UNIT: Whole Numbers

CONCEPT: Whole numbers are important in consumerism - Unit Pricing.

Career Education Activity	Activity Evaluation/Comments

PROBLEM - As you are shopping, it is important to be able to compare price, so that you can make the best buy. (Explain unit pricing.)

A.

Item	Price	Unit Price
Eggs	79¢ doz.	? / egg
Soda	$1.05 - 6-pk.	? / bottle
Potatoes	$1.35 - 10 lb.	? / lb.
Bananas	.82¢ - 5 lb.	? / lb.
Coffee	$2.49 - 16 oz.	? / oz.

B. If you are buying potato chips, unit pricing will enable you to make the best buy. You see the following-

32 oz. bag for 99¢
16 oz. bag for 69¢
4 oz. bag for 19¢

Discuss which is the best buy.

RESEARCH - Have students bring in grocery advertisements to compare unit prices of items within the same store and between different stores.

DISCUSSION

1. Discuss the philosophy "Let the Buyer Beware"; i.e. dangerous drugs or compounds that are present in products, hexachloraphene, saccharin.

2. Discuss the occupations involved in running grocery stores-clerks, produce managers, meat cutters, stockboys.

STUDENT PROJECT - Encourage students to display to the class various sizes of containers and show the economy of buying in quantity. Of special interest should be words such as, "Jumbo", "King-size".

UNIT: Whole Numbers

CONCEPT: Whole numbers are important in consumerism - unit pricing.

Career Education Activity	Activity Evaluation/Comments

PROBLEM

1. Choose 5 items that can be purchased from a grocery store such as:

(a) apples	20¢ ea.
(b) oranges	15¢ ea.
(c) soda	15¢ a bottle
(d) potato chips	39¢ a bag
(e) candy	5¢ a piece

2. What is the total cost of the above 5 items?

3. How much change from $1.00?

RESEARCH - Encourage students to bring empty containers to class and compare prices. Is there a difference in the price of specific items from one store as compared to another store? If so, what are some of the reasons for the price difference?

RESEARCH - Have students trace a product to its source and name the various jobs associated with each step and visualize this in a poster or bulletin board.

DISCUSSION - Discuss reasons why a store will put an item "on sale."

UNIT: Whole Numbers

CONCEPT: Whole numbers are important in health careers.

Career Education Activity	Activity Evaluation/Comments
STUDENT PROJECTS - Dietitians are experts in the art of feeding individuals and groups. They excel in the sciences of nutrition and management. A. Obtain a calorie chart for the classroom. 1. Have students determine the number of calories they have consumed in the past 24 hours. 2. Have students draw up a sample balanced diet for 2250 calories a day. 3. Have students report on qualifications and duties of a dietitian. RESOURCE PERSON - Have the school dietitian speak to the class. RESEARCH - Contact the local Public Health Service and correspond with the dietitian. Perhaps she can mail some literature or visit the class. RESOURCE MATERIALS - Free publications A. Registry of Medical Technologists, 445 N. Lake Shore Drive, Chicago, Ill. 60611 B. United Business Schools Association, 1101 17th St., N.W. Wash. D.C. 20036 (Your Career as a Medical Secretary) C. American Hospital Association, 840 N. Lake Shore Drive, Chicago, Ill.60611 (Careers that Count) D. American Public Health Association, 1740 Broadway, New York, N.Y. 10018 (Public Health Nurses) E. American Dietetic Association, 620 N. Michigan Ave., Chicago, Ill. 60611 (Dietetics as a Profession)	

UNIT: **Whole Numbers**

CONCEPT: **Whole numbers are important in the construction industry.**

Career Education Activity	Activity Evaluation/Comments

PROBLEM - A city is building a new hospital; it is being funded by the following sources:

Federal	$2,857,000.00
State	1,001,085.00
County	527,832.00
City	125,386.00
Private	847,628.00

A. What is the total cost of this hospital?
B. How much more money comes from the federal government than from the state government?
C. How much money comes from county, city, and private sources?
D. Have students list jobs involved in building the hospital.

DISCUSSION - Discuss the future need for hospital workers.

ROLE PLAY - Students can act out a brief play using as many different hospital personnel as possible.

DISCUSSION - Even though a particular health career may not pay a high wage, discuss why certain people might be very happy to work in these careers.

DEBATE - Have a student debate on the pro's and con's of male nurses.

RESOURCE MATERIALS - Free publications

a. American College of Hospital Administrators, 840 N. Lake Shore Drive, Chicago, Ill. 60611 (Hospital Administration As A Career)
b. American Hospital Assoc., 840 N. Lake Shore Drive, Chicago, Ill. 60611 (Hospital Public Relations Officer)

UNIT: Whole Numbers

CONCEPT: Whole numbers are important in police work.

Career Education Activity	Activity Evaluation/Comments
Slow Down - You'll Live Longer CLASS ACTIVITY - We can't measure the speed of a car, but you can use your bicycle for this activity. 1. Mark a starting and stopping point on the playground. Pedal your bicycle very fast up to the stopping line and stop as quickly as you can. Measure the distance you travel beyond the stopping point. 2. Try it at slow, medium, and fast speeds. What are the results? Compare speeds with stopping distances. (a) What are the dangers related to fast driving? What are the speed limits in your city? state? (b) How are the limits related to the type of road? (c) From a state driving manual, find and read the sections related to speeds and stopping distances. RESOURCE PERSON - Have a policeman explain how he can tell the speed of another car. Ask him about radar and how it works. DISCUSSION - What do the length and direction of skid marks at an accident show? MATERIALS NEEDED - Tape measure, bicycle, drivers' training manual, tape or chalk to mark starting - stopping areas.	

UNIT: Whole Numbers

CONCEPT: Whole numbers are important in comparing average incomes to educational levels.

Career Education Activity	Activity Evaluation/Comments

TABLE - DISCUSSION - According to 1970 Census, the average income of persons compared to the amount of their education is as follows:

Years of Education	Average Annual Income
0-7	$3610.
8	$7123
1-3 High	$8945
4 Yr. High S.	$9996
1-3 College	$11,701
Coll. Grad.	$14,361

Discuss in class exactly what is shown in the chart. (Be sure to emphasize that the incomes are averages).

RESEARCH - Explore different classifications of jobs: skilled, semiskilled, unskilled, professional. Make a poster showing workers from each group.

DISCUSSION - Which is more important-the amount of education a person has or the type of education a person has?

UNIT: Other Numeral Systems

CONCEPT: Numeral systems have practical applications-printing.

Career Education Activity	Activity Evaluation/Comments
STUDENT PROJECTS - A lithographer sets the type for printing presses. Often he is required to use Roman numerals. 1. List examples of printed material in which Roman numerals are used. 2. List other sources in which Roman numerals can be found. FIELD TRIP - A visit to a printing company or newspaper publishing company may be an interesting experiences. If this is not possible, someone who works in printing may wish to visit the class. STUDENT PROJECT - Have students write a Want Ad advertising for the job of lithographer. RESOURCE MATERIALS Free publications: a. Graphic Arts Industry, Education Council, 4615 Forbes Ave., Pittsburgh, Pa. 15213 (Careers in Graphic Communications) b. Rochester Institute of Technology, Public Relations Office, Rochester, N.Y. 14608 (Careers in Printing) c. Printing Industries Technical Institute, 1514 South St., Nashville, Tenn. 37212 (Your Career in Printing) If your school has the Chronicle Guidance Publications, you may wish to refer to the brief on the printing and publishing industry.	

UNIT: Other Numeral Systems

CONCEPT: Numeral systems have practical applications - operation of computers.

Career Education Activity	Activity Evaluation/Comments
STUDENT PROJECTS - The field of computers is an ever-expanding area in which persons trained in mathematics are needed. The Binary system is used in the operation of many computers. a. Have the students list local businesses that use computers. b. Have the students make a simple computer based on the binary system. RESOURCE PERSON - A person who works with computers could visit the class and discuss his job. DISPLAY - Students may create displays showing the operation of computers and their contributions to the world of work. DISCUSSION - "A computer operated machine is developed to replace the jobs of 5 men; therefore, computers and machines will cause more unemployment." Discuss the validity of this statement. RESOURCE MATERIALS 1. Free publications a. U.S. Civil Service Commission, Wash. D.C. 20415 (New Directions-Career Opportunities for Computer Specialists in the Federal Gov't). b. Electronic Computer Programming Institute, Empire State Bldg, New York 10001 (Computer programming-a new profession for you.) 2. If your school has the Chronicle Guidance Publications, you may wish to refer to the one entitled "Programmer."	

UNIT: Other Numeral Systems

CONCEPT: Numeral systems have practical applications - sequences in botany.

Career Education Activity	Activity Evaluation/Comments

PROBLEM - A botanist is a person who studies plants. He observes 2 petunias in a natural environment. Assuming each plant produces 2 of its kind each year, at what rate will it reproduce?

Year	1	2	3	4	5
	p	p	p	pp	pp
	p	p	p	pp	pp
		p	p	pp	pp
		p	p	pp	pp
			p	pp	pp
			p	pp	pp
			p	pp	pp
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After 5 years, how many petunias would 3 plants reproduce? 4? 5? 10? Do you see a pattern or a shortcut?

RESOURCE PERSON - Have a nursery owner or worker come in to visit the class and discuss his work with plants.

STUDENT PROJECTS - Have students make oral reports or bulletin board displays involving careers that utilize exponential numbers.

RESOURCE MATERIALS - Free Publications
a. Botanical Society of America, "Botany as a Profession"

UNIT: Other Numeral Systems

CONCEPT: Numeral systems have practical applications - scientific careers.

Career Education Activity	Activity Evaluation/Comments
STUDENT PROJECTS - A scientist in the aerospace industry needs to work with very large numbers. For example, the maximum distance of the planet Pluto from Earth is 4,700,000,000 miles, which in scientific notation is 4.7×10^9. It is helpful to him to be able to use shortcuts in writing these large numbers. a. Have the students research the various jobs in the aerospace industry. b. The idea of subsets can shown, using exponents. c. Motivational story about the boy who worked for 30 days - earned 1 penny the first day, 2 pennies the next day, and each day the money doubled. RESOURCE PERSON - An employee or public relations person from a local aerospace industry may visit the class. DISCUSSION - Topic - Many people should attempt to become astronauts because they have the opportunity to explore outer space. DISCUSSION - BULLETIN BOARD - Scientists often deal with extremely small measurements, such as .00000000000000000000000166 grams which represents the weight of 1 atom of hydrogen, and is written as 1.66 x 10-24 in scientific notation. BULLETIN BOARD - Students are to think of careers dealing with very small numbers. Make a bulletin board showing these.	

UNIT: Rational Numbers - Fractions

CONCEPT: Fractions are important in the field of plumbing.

Career Education Activity	Activity Evaluation/Comments

PROBLEM -

1. A plumber uses a table to tell how long to cut pipes. The left-hand column shows the distance into a fitting that a certain size pipe can be screwed.

Distance	Diameter
½ in.	½ in.
½ in.	3/4 in.
9/16 in.	1 in.
11/16 in.	2 in.

2. If a plumber screws fittings on each end of a 3/4 inch pipe that is 12 inches long. How long will the pipe be between the fittings. (11 in.)

STUDENT PROJECTS

1. Have students develop similar problems using data given above.
2. Have students locate pipes and connecting joints. Compare the diameters of the pipes to the diameters of the joints.
3. Students may also explore the different kinds of pipe with respect to use, cost, ease of installation, and length of time they may be used.

UNIT: Rational Numbers - Fractions

CONCEPT: Fractions are important in the fields of carpentry and electronics.

Career Education Activity	Activity Evaluation/Comments

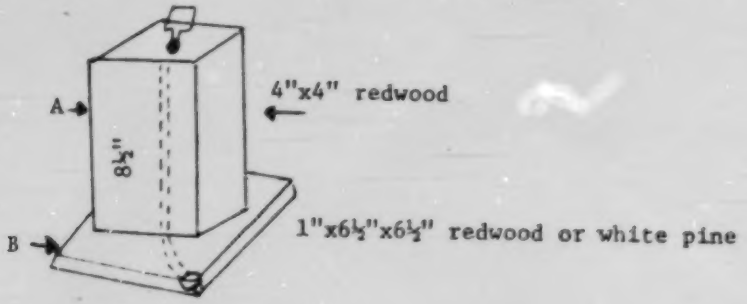
Directions and Activity Sheets

Carpentry
Pictures of Carpentry tools and Carpenters at work.

General Info: Job qualifications, training, future outlook wages.

STUDENT PROJECT -Somewhere in the rear of the classroom provide space and materials for students to construct a pre-selected (teacher's choice) woodworking project.

Suggestion: Small table lamp



Directions: (1) Using the sketch or model (whichever the teacher wants to provide) layout the parts needed using the correct measurements. If necessary, cut parts A & B to proper sizes, sand and assemble into one part.
(2) Assemble the lamp socket and electric cord with parts A and B.

UNIT: Rational Numbers - Fractions

CONCEPT: Fractions are important in the fields of carpentry and electronics.

Career Education Activity	Activity Evaluation/Comments
Directions: (3) Make your final sanding and fine "touch-up" work. (4) Stain or paint the project. *Allow the students to make changes in design if they desire to do so. Note: This may seem like an expensive project that your school does not provide money to do, but your students could bear the cost for a very small amount assessed each student. (It would be a very good gift for the parents or a special friend.) Suggestions: (1) Have the students match a list of words on the activity sheet with the pictures of tools at the learning center. (2) Have the students write a few sentences explaining the proper use of specific tools and what work is accomplished through the use of that tool. (3) Have the students read books about carpentry work. (4) Have the students interview a carpenter. (5) Arrange for the students to take a trip to a local high school woodworking shop or woodworking industry.	

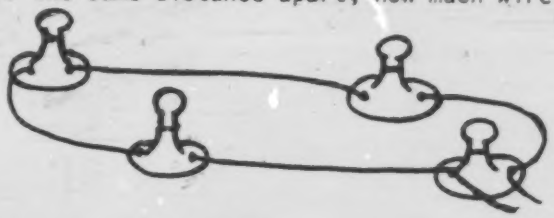
UNIT: Rational Numbers - Fractions

CONCEPT: Fractions are important in the field of electronics.

Career Education Activity	Activity Evaluation/Comments

PROBLEM

1. An electrician has a job of wiring a basement so that there are 4 light sockets. The length of the wire in the circuit is 62 feet. If each socket is the same distance apart, how much wire is between each point?



How far apart would each be if there were 5 sockets? 6 sockets? 10?

2. Using a 6-socket circuit, how many feet of wire will be required if each socket is 8 3/4 feet apart?

STUDENT PROJECT - Have students diagram a room in their home showing the electrical outlets and approximate distances between them.

RESOURCE PERSON - Invite an electrician in to discuss his job with the class, and show career opportunities available and qualifications needed.

DISCUSSION - Quality is very important in most careers. Why is it important that the work done by an electrician be of a quality nature?

INTERVIEW - Have a student interview an electrician and report to the class.

UNIT: Rational Numbers - Fractions

CONCEPT: Fractions are important in the field of quality control.

Career Education Activity	Activity Evaluation/Comments
Quality control personnel are in charge of seeing that manufactured goods are within specified tolerances. PROBLEM - If you worked in a lumber mill, and the length of boards must not vary more than ¼" from a length of 8' which of the following boards would be acceptable? 1. 95 7/8 inches 2. 96 1/2 " 3. 96 3/8 " 4. 95 3/4 " Many examples similar to these can be used. DISCUSSION - a. Quality control people may be found in the manufacturing of automobile engine parts and electronic parts. Think of other industries in which a quality control person could be found. b. Why is there a need for quality control personnel? c. Which is more important in producing a product--quantity or quality? Does the type of product make a difference? d. People differ in many ways. List three characteristics that a quality control person should have and three characteristics they should not have. STUDENT PROJECT - Write a Want Ad advertising for the job of quality control supervisor.	

UNIT: Rational Numbers - Fractions

CONCEPT: Addition and subtraction of fractions are needed in the career of carpentry.

Career Education Activity	Activity Evaluation/Comments
PROBLEM - In the building industry, carpenters need to be skilled in the addition and subtraction of fractional parts. For example: 1. A carpenter has a board 7½ ft. long. He needs a board 6¼ ft. long. How much does he need to cut off? 2. What is the total length of 2 boards - one is 2 3/4 ft. long and the other 3 5/6 ft. long? In feet? In inches? DISCUSSION - A carpenter is building a house. Discuss where he might use fractions? ACTIVITY - Draw lines using the following measurements: (a) 1 foot, 2¾ inches (b) 8-3/16 inches (c) 14 7/8 inches (d) 2/4 inches STUDENT PROJECT - Have students design and construct a simple bird house or model home out of tagboard or any other sturdy material. Have students clip from the classified employment section of a newspaper, advertisements soliciting carpenters. Have students compute the monthly, and yearly wages. RESOURCE PERSON - Probably a parent from your class will either be a professional carpenter or be proficient in carpentry. Invite him to speak to the class and explain some of the tools a carpenter will use. RESOURCE MATERIALS - If your school has the Chronicle Guidance Publications, you may wish to refer to the one on Carpentry.	

UNIT: Rational Numbers - Fractions

CONCEPT: Addition & subtraction of fractions is needed in careers such as sheet metal layout and drafting.

Career Education Activity	Activity Evaluation/Comments
PROBLEM - A sheet metal layout man uses a blueprint or plan to make mechanical designs on metal which will later be cut or shaped by a sheet metal mechanic. A layout man must cut a sheet of metal 8½ ft. long from a longer sheet which is 9¼ ft. long. What is the length of the piece left over? DISCUSSION - A draftsman draws plans for various kinds of construction, including precise measurements. What qualifications do you think are needed to be a draftsman? STUDENT PROJECTS - 1. Ask students to choose a career and give an example of how fractions are used. Students may wish their parents to explain such a career to the class. 2. Encourage students to draft a room in their home and draw it to scale. With practice, students may wish to draft model airplanes, toys, inventions. 3. Students may be able to obtain blue-prints from a builder or from their home and display them to the class. These displays may be in the form of a bulletin board as evidence of the skills required in drafting. RESOURCE PERSON - Contact your industrial arts teacher and request that he speak to the class on "metal-related" careers. RESOURCE MATERIALS - Free Publications a. General Motors Corp., Detroit, Mich. 48202 (Can I Be A Draftsman) b. Society of Reproduction Engineers, 305 S. Andrews Ave., Suite 610, Fort Lauderdale, Florida 33301 (Careers in Graphic Reproductions) c. American Institute for Design and Drafting, 305 S. Andrews Ave., Suite 610, Fort Lauderdale, Florida (Drafting As a Career)	

UNIT: Rational Numbers - Fractions

CONCEPT: The ability to solve fractional problems is needed in the career of a draftsmen.

Career Education Activity	Activity Evaluation/Comments
STUDENT PROJECT - 1. Using the measurements of the classroom as it is now, "gut" the room leaving only the four walls. Redesign the room, making all necessary changes (additions and deletions) that you feel are essential for providing an atmosphere that is conducive to proper learning. 2. Things to remember: a. We are on a limited budget and do not have money to waste for non-essentials. b. Your drawing is to be based on a scale such as 1" = 2' or ½" = 2', or something similar. You decide the scale and indicate it on your drawing. c. Rely on your classroom experiences when you consider making changes. Are the changes really necessary? For what purpose? 3. After you have designed the room, make a list of the materials that you plan to use in the construction of it, and try to give an accurate estimate of what the cost of the finished job will be. Substantiate your cost estimates with valid, local material prices. RESOURCE MATERIALS NEEDED 1. Books related to the work of a draftsman 2. Tools used by a draftsman 3. Materials cost lists of local building supplies companies	

UNIT: Rational Numbers - Fractions

CONCEPT: Multiplication & Division of Fractions are important in the field of transportation.

Career Education Activity	Activity Evaluation/Comments

STUDENT PROJECTS -

1. Encourage students to develop their own activities dealing with times, rates, and distances in the following areas:
   a. Trucking
   b. Railroading
   c. Air Transportation
   d. Busing
   e. Shipping

   For example,

   A local trucking concern makes frequent trips to New York.

Time		Rate	Distance	Fuel	Gas	Cost per
Leave	Arrive			Consumption	Mileage	Mile

2. Have students develop a mural to visualize the different modes of transportation, illustrated by their problems.

3. Have students compute gas mileage for family vehicles during a week.

4. Have students write Want Ads for various careers in the transportation field.

RESOURCE MATERIALS - If your school has the Chronicle Guidance Publications, you may wish to refer to -

   a. The changing image of truck drivers
   b. On the road with the truckers
   c. Powered industrial truck operator
   d. Truck driver
   e. Bus driver
   f. Commercial airplane pilot
   g. Airplane stewardess
   h. Ship captain and officers
   i. Shipping and receiving clerks
   j. Railroad transportation industry

UNIT: Rational Numbers - Fractions

CONCEPT: Fractions are important in the field of transportation - rates.

Career Education Activity	Activity Evaluation/Comments

PROBLEMS -

1. You are going to take a trip to Disney World, Florida. You wish to investigate the various means of transportation.

Transp.	Time	Rate (m.p.h.)	Distance
Plane	2¼		1000 miles
Bus	21½		1000 miles
Auto Rail	12		1000 miles
Car	23½		1000 miles

2. Given the following costs for each type of transportation,

Plane	$180 round trip
Bus	$ 80 round trip
Auto-rail	$150 round trip
Car	8¢ per mile

Which means of transportation would be most economical?

3. What additional cost would be involved in each type of transportation?

DISCUSSION - What are the advantages and disadvantages of each type of transportation?

COMMITTEE - Divide the class into committee. Each committee will decide on a destination and compute the distance, rate and time for four different means of transportation.

UNIT: Rational Numbers - Fractions

CONCEPT: Fractions are important in the field of transportation rates.

Career Education Activity	Activity Evaluation/Comments
ROLE PLAY - Have students role play various occupations in the transportation industry. POSTER - BULLETIN BOARD - Have students illustrate on a poster or bulletin board the many transportation jobs involved in transporting a product from its source to the consumer. RESOURCE MATERIALS - 1. If your school has the Chronicle Gudiance Publications, you may wish to refer to - a. The changing image of truck drivers b. On the road with the truckers c. Powered industrial truck operator d. Truck driver e. Bus driver f. Commercial airplane pilot g. Airplane stewardess h. Ship captain and officers i. Shipping and receiving clerks j. Railroad transportation industry 2. Free publications a. Association of American Railroads, Public Relations Dept., American Railroads Bldg., Wash. D.C. 20036 (Railroads in Action) b. American Trucking Associations, Education Section-Public Relations Dept., 1616 P St., N.W. Wash.D.C. 20036 ("On the Road with the Truckers" and "Opportunities in the Trucking Industry") c. National Association of Motor Bus Owners, 839 17th St., N.W. Wash. D.C. 20006 (Bus Facts)	

UNIT: Decimals

CONCEPT: Decimals are necessary in computing income tax.

Career Education Activity	Activity Evaluation/Comments
PROBLEM - "Two things are certain - death and taxes" goes the old saying. Although the preparation of income tax forms confuses many people, it is not as complicated as many people think. Two skills are required - some basic mathematical skills and the ability to follow directions. Attached are two income tax situations - 1. a single person taking the standard deduction 2. a family making itemized deductions Students should fill in blanks that are checked or marked with an "X". DISCUSSION - Discuss graduated income taxes - the more you make, the more you pay. RESOURCE MATERIAL - Free publications from the Internal Revenue Service, U. S. U.S. Treasury Dept., 1111 Constitution Ave., N. W., Wash. D.C. 20224 a. A Career and a Sense of Purpose b. Careers in Taxation c. Engineer Tax Man d. Internal Revenue Agent e. Internal Revenue Officer f. Tax Technician g. Treasury Enforcement Agent	

Single person taking standard deduction - table attached.

Form 1040 US Department of the Treasury / Internal Revenue Service — Individual Income Tax Return — 1972

For the year January 1–December 31, 1972, or other taxable year beginning ..... 1972, ending ..... 19.....

Please print or

First name and initial (If joint return, use first names and middle initials of both): X — Last name: X — Your social security number (Husband's, if joint return): 214 73 1865

Present home address (Number and street, including apartment number, or rural route): X — Wife's number, if joint return:

City, town or post office, State and ZIP code: X — Occupation: Yours X / Wife's

Please attach Copy B of Form W-2 here

Filing Status—check only one:

1 ☒ Single
2 ☐ Married filing joint return (even if only one had income)
3 ☐ Married filing separately. If wife (husband) is also filing give her (his) social security number and first name here.
4 ☐ Unmarried Head of Household
5 ☐ Widow(er) with dependent child (Enter year of death of husband (wife) ▶ 19)

Exemptions

	Regular	65 or over	Blind	Enter number of boxes checked
6 Yourself	☐	☐	☐	1
7 Wife (husband)	☐	☐	☐	

8 First names of your dependent children who lived with you

Enter number

9 Number of other dependents (from line 32) ▶ 0
10 Total exemptions claimed ▶ 1

Income

11	Wages, salaries, tips, and other employee compensation. (Attach Form W-2 to front. If unavailable, attach explanation)	11	8400
12a	Dividends (see pages 6 and 13 of instr.) $ 12b Less exclusion $ Balance ▶ (If gross dividends and other distributions are over $200, list in Part I of Schedule B.)	12c	0
13	Interest income. [If $200 or less, enter total without listing in Schedule B. If over $200, enter total and list in Part II of Schedule B]	13	42
14	Income other than wages, dividends, and interest (from line 45)	14	0
15	Total (add lines 11, 12c, 13 and 14)	15	8442
16	Adjustments to income (such as "sick pay," moving expenses, etc. from line 50)	16	0
17	Subtract line 16 from line 15 (adjusted gross income)	17	X

● **Caution:** *If you have unearned income and you could be claimed as a dependent on your parent's return, see boxed instruction on page 7, under the heading "Tax-Credits-Payments." Check this block* ☐.

● *If you do not itemize deductions and line 17 is under $10,000, find tax in Tables and enter on line 18.*

● *If you itemize deductions or line 17 is $10,000 or more, go to line 51 to figure tax.*

Tax, Payments and Credits

18	Tax, check if from: ☒ Tax Tables 1–12, Schedule D ☐ Tax Rate Schedule X, Y, or Z, Schedule G or ☐ Form 4726		18	X
19	Total credits (from line 61)		19	0
20	Income tax (subtract line 19 from line 18)		20	X
21	Other taxes (from line 67)		21	0
22	Total (add lines 20 and 21)		22	X
23	Total Federal income tax withheld (attach Forms W-2 or W-2P to front)	23 1,397		
24	1972 Estimated tax payments (include amount allowed as credit from 1971 return)	24 0		
25	Amount paid with Form 4868, Application for Automatic Extension of Time to File U.S. Individual Income Tax Return	25 0		
26	Other payments (from line 71)	26 0		
27	Total (add lines 23, 24, 25, and 26)		27	X

Bal. Due or Refund

28	If line 22 is larger than line 27, enter BALANCE DUE IRS. Pay in full with return. Make check or money order payable to Internal Revenue Service ▶		28	X
29	If line 27 is larger than line 22, enter amount OVERPAID ▶		29	
30	Line 29 to be REFUNDED TO YOU ▶		30	
31	Line 29 to be credited on 1973 estimated tax 31			

Foreign Accounts

Did you, at any time during the taxable year, have any interest in or signature or other authority over a bank, securities, or other financial account in a foreign country (except in a U.S. military banking facility operated by a U.S. financial institution)? ▶ ☐ Yes ☒ No
If "Yes," attach Form 4683. (For definitions, see Form 4683.)

Note: Be sure to complete Revenue Sharing (lines 33 and 34) on next page.

Attach Check or Money Order here

Write soc. sec. no. on Check or Money Order. Attach here

Sign here

Under penalties of perjury, I declare that I have examined this return, including accompanying schedules and statements, and to the best of my knowledge and belief it is true, correct, and complete. Declaration of preparer (other than taxpayer) is based on all information of which he has any knowledge.

▶ X Your signature Date — ▶ Preparer's signature (other than taxpayer) Date

▶ Wife's (husband's) signature (if filing jointly, BOTH must sign even if only one had income) — Address (and ZIP Code) Preparer's Emp. Ident. or Soc. Sec. No.

32

1971 Tax Tables

For persons with incomes under $10,000 who do not itemize deductions on Schedule A, Form 1040.

The standard deduction and deduction for exemptions have been taken into account in determining the tax shown in these Tables.

The Tables show the LOWER tax after taking into account both the percentage standard deduction and the low income allowance except in the case of married persons filing separately. For married persons filing separate returns, the tables show the tax figured on the percentage standard deduction and on the low income allowance.

Select the Tax Table that covers the total number of exemptions on Form 1040, line 11. On the appropriate table, read down the income columns until you find the line covering the adjusted gross income you entered on Form 1040, line 18. Then read across to the column heading describing your marital status. Enter the tax you find there on Form 1040, line 19.

Married persons filing separate returns: Choose either the low income allowance or percentage standard deduction to figure your tax, but if one uses the percentage standard deduction, then both must use it. If you are a married person living apart from your spouse, see page 4 of the instructions in this package to see if you can be considered to be "unmarried" for purposes of using the tax tables below.

TABLE 1.—Returns claiming ONE exemption (and not itemizing deductions)

If adjusted gross income is—		And you are—			
		Single, not head of household	Head of household	Married filing separate return claiming—	
At least	But less than			Low income allowance	% Standard deduction
		Your tax is—			
$0	$775	$0	$0	$0	$0
775	800	0	0	0	1
800	825	0	0	0	4
825	850	0	0	0	8
850	875	0	0	0	11
875	900	0	0	0	14
900	925	0	0	0	17
925	950	0	0	0	20
950	975	0	0	0	23
975	1,000	0	0	0	26
1,000	1,025	0	0	0	29
1,025	1,050	0	0	0	32
1,050	1,075	0	0	0	35
1,075	1,100	0	0	0	38
1,100	1,125	0	0	0	41
1,125	1,150	0	0	0	44
1,150	1,175	0	0	0	47
1,175	1,200	0	0	0	50
1,200	1,225	0	0	2	53
1,225	1,250	0	0	5	56
1,250	1,275	0	0	9	59
1,275	1,300	0	0	12	62
1,300	1,325	0	0	16	65
1,325	1,350	0	0	19	68
1,350	1,375	0	0	23	72
1,375	1,400	0	0	26	75
1,400	1,425	0	0	30	78
1,425	1,450	0	0	33	81
1,450	1,475	0	0	37	85
1,475	1,500	0	0	40	88
1,500	1,525	0	0	44	91
1,525	1,550	0	0	47	94
1,550	1,575	0	0	51	98
1,575	1,600	0	0	54	101
1,600	1,625	0	0	58	104
1,625	1,650	0	0	61	107
1,650	1,675	0	0	65	111
1,675	1,700	0	0	68	114
1,700	1,725	0	0	72	117
1,725	1,750	2	2	76	120
1,750	1,775	5	5	79	124
1,775	1,800	9	9	83	127
1,800	1,825	12	12	87	130
1,825	1,850	16	16	91	134
1,850	1,875	19	19	94	137
1,875	1,900	23	23	98	140
1,900	1,925	26	26	102	143
1,925	1,950	30	30	106	147
1,950	1,975	33	33	109	150
1,975	2,000	37	37	113	154
2,000	2,025	40	40	117	157
2,025	2,050	44	44	121	161
2,050	2,075	47	47	124	164
2,075	2,100	51	51	128	168
2,100	2,125	54	54	132	171
2,125	2,150	58	58	136	175
2,150	2,175	61	61	139	178
2,175	2,200	65	65	143	181
2,200	2,225	68	68	147	185
2,225	2,250	72	72	151	188
2,250	2,275	76	75	155	192
2,275	2,300	79	79	159	195
2,300	2,325	83	82	163	199
2,325	2,350	87	86	167	202
2,350	2,375	91	89	171	206
2,375	2,400	94	93	175	209
2,400	2,425	98	96	179	213
2,425	2,450	102	100	183	216
2,450	2,475	106	103	187	220
2,475	2,500	109	107	191	223
2,500	2,525	113	110	195	227
2,525	2,550	117	114	199	231
2,550	2,575	121	117	203	234
2,575	2,600	124	121	207	238
2,600	2,625	128	124	211	242
2,625	2,650	132	128	215	245
2,650	2,675	136	131	219	249
2,675	2,700	139	135	223	253
2,700	2,725	143	138	227	256
2,725	2,750	147	142	231	260
2,750	2,775	151	146	236	264
2,775	2,800	155	150	240	268
2,800	2,825	159	154	244	271
2,825	2,850	163	158	248	275
2,850	2,875	167	162	253	279
2,875	2,900	171	166	257	282
2,900	2,925	175	170	261	286
2,925	2,950	179	174	265	290
2,950	2,975	183	178	270	293
2,975	3,000	187	182	274	297
3,000	3,050	193	188	280	303
3,050	3,100	201	196	287	310
3,100	3,150	209	204	295	318
3,150	3,200	217	212	306	327
3,200	3,250	225	220	315	335
3,250	3,300	234	228	324	343
3,300	3,350	242	236	334	351
3,350	3,400	251	244	343	360
3,400	3,450	259	252	353	368
3,450	3,500	268	260	362	376
3,500	3,550	276	268	372	384
3,550	3,600	285	276	381	393
3,600	3,650	293	284	391	401
3,650	3,700	302	292	400	409
3,700	3,750	310	300	410	417
3,750	3,800	320	309	419	426
3,800	3,850	329	318	429	434
3,850	3,900	339	327	438	442
3,900	3,950	348	336	448	451
3,950	4,000	358	345	457	459
4,000	4,050	367	354	467	467
4,050	4,100	377	363	476	475
4,100	4,150	386	372	486	484
4,150	4,200	396	381	495	492
4,200	4,250	405	390	505	500
4,250	4,300	415	399	514	508
4,300	4,350	424	408	524	517
4,350	4,400	434	417	533	525
4,400	4,450	443	426	543	533
4,450	4,500	453	435	552	541
4,500	4,550	462	444	562	550
4,550	4,600	472	453	571	558
4,600	4,650	481	462	581	566
4,650	4,700	491	471	590	575
4,700	4,750	500	480	600	583
4,750	4,800	510	489	609	591
4,800	4,850	519	498	619	599
4,850	4,900	529	507	628	608
4,900	4,950	538	516	638	616
4,950	5,000	548	525	647	624
5,000	5,050	557	534	657	632
5,050	5,100	567	543	666	641
5,100	5,150	576	552	676	649
5,150	5,200	586	561	685	657
5,200	5,250	595	570	696	665
5,250	5,300	605	579	707	674
5,300	5,350	614	588	718	682
5,350	5,400	624	597	729	690
5,400	5,450	633	606	740	700
5,450	5,500	643	615	751	709
5,500	5,550	652	624	762	719
5,550	5,600	662	633	773	729
5,600	5,650	671	642	784	738
5,650	5,700	681	651	795	748
5,700	5,750	690	660	806	757
5,750	5,800	701	670	817	767
5,800	5,850	711	679	828	778
5,850	5,900	722	689	839	789
5,900	5,950	732	698	850	800
5,950	6,000	743	708	861	811
6,000	6,050	753	717	872	822
6,050	6,100	764	727	883	833
6,100	6,150	774	736	894	844
6,150	6,200	785	746	905	855
6,200	6,250	795	755	916	866
6,250	6,300	806	765	927	877
6,300	6,350	816	774	938	888
6,350	6,400	827	784	949	899
6,400	6,450	837	793	960	910
6,450	6,500	848	803	971	921
6,500	6,550	858	812	982	932
6,550	6,600	869	822	993	943
6,600	6,650	879	831	1,004	954
6,650	6,700	890	841	1,015	965
6,700	6,750	900	850	1,026	976
6,750	6,800	911	860	1,037	987
6,800	6,850	921	869	1,048	998
6,850	6,900	932	879	1,059	1,009
6,900	6,950	942	888	1,070	1,020
6,950	7,000	953	898	1,081	1,031
7,000	7,050	963	907	1,092	1,042
7,050	7,100	974	917	1,103	1,053
7,100	7,150	984	926	1,114	1,064
7,150	7,200	995	936	1,125	1,075
7,200	7,250	1,005	945	1,136	1,086
7,250	7,300	1,016	955	1,149	1,097
7,300	7,350	1,026	964	1,161	1,108
7,350	7,400	1,037	974	1,174	1,119
7,400	7,450	1,047	983	1,186	1,130
7,450	7,500	1,058	993	1,199	1,143
7,500	7,550	1,068	1,002	1,211	1,155
7,550	7,600	1,079	1,012	1,224	1,168
7,600	7,650	1,089	1,021	1,236	1,180
7,650	7,700	1,100	1,031	1,249	1,193
7,700	7,750	1,110	1,040	1,261	1,205
7,750	7,800	1,122	1,051	1,274	1,218
7,800	7,850	1,134	1,062	1,286	1,230
7,850	7,900	1,146	1,073	1,299	1,243
7,900	7,950	1,158	1,084	1,311	1,255
7,950	8,000	1,170	1,095	1,324	1,268
8,000	8,050	1,182	1,106	1,336	1,280
8,050	8,100	1,194	1,117	1,349	1,293
8,100	8,150	1,205	1,127	1,361	1,305
8,150	8,200	1,218	1,136	1,374	1,318
8,200	8,250	1,225	1,146	1,386	1,330
8,250	8,300	1,236	1,155	1,399	1,343
8,300	8,350	1,246	1,165	1,411	1,355
8,350	8,400	1,257	1,174	1,424	1,368
8,400	8,450	1,267	1,184	1,436	1,380
8,450	8,500	1,278	1,194	1,449	1,393
8,500	8,550	1,288	1,203	1,461	1,405
8,550	8,600	1,298	1,213	1,474	1,418
8,600	8,650	1,309	1,222	1,486	1,430
8,650	8,700	1,319	1,232	1,499	1,443
8,700	8,750	1,330	1,241	1,511	1,455
8,750	8,800	1,340	1,251	1,524	1,468
8,800	8,850	1,351	1,261	1,536	1,480
8,850	8,900	1,361	1,270	1,549	1,493
8,900	8,950	1,372	1,280	1,561	1,505
8,950	9,000	1,382	1,289	1,574	1,518
9,000	9,050	1,392	1,299	1,586	1,530
9,050	9,100	1,403	1,308	1,599	1,543
9,100	9,150	1,413	1,318	1,611	1,555
9,150	9,200	1,424	1,328	1,624	1,568
9,200	9,250	1,434	1,337	1,637	1,580
9,250	9,300	1,445	1,347	1,651	1,593
9,300	9,350	1,455	1,356	1,665	1,605
9,350	9,400	1,466	1,366	1,679	1,618
9,400	9,450	1,476	1,375	1,693	1,630
9,450	9,500	1,486	1,385	1,707	1,644
9,500	9,550	1,497	1,395	1,721	1,658
9,550	9,600	1,507	1,404	1,735	1,672
9,600	9,650	1,518	1,414	1,749	1,686
9,650	9,700	1,528	1,423	1,763	1,700
9,700	9,750	1,539	1,433	1,777	1,714
9,750	9,800	1,549	1,442	1,791	1,728
9,800	9,850	1,559	1,452	1,805	1,742
9,850	9,900	1,570	1,462	1,819	1,756
9,900	9,950	1,580	1,471	1,833	1,770
9,950	10,000	1,591	1,481	1,847	1,784

Answer Key

Form **1040** **US** Department of the Treasury / Internal Revenue Service

Individual Income Tax Return

1972

For the year January 1–December 31, 1972, or other taxable year beginning ..... 1972, ending ..... 19 .....

Please print.

First name and initial (If joint return, also first names and middle initials of both) ✓ | Last name ✓ | Your social security number (Husband's, if joint return) 214 73 1845

Present home address (Number and street, including apartment number, or rural route) ✓ | Wife's number, if joint return

City, town or post office, State and ZIP code ✓ | Occupation: Yours ✓ Wife's

Please attach Copy B of Form W-2 here

Filing Status—check only one:

1 ☒ Single
2 ☐ Married filing joint return (even if only one had income)
3 ☐ Married filing separately. If wife (husband) is also filing give her (his) social security number and first name here.
4 ☐ Unmarried Head of Household
5 ☐ Widow(er) with dependent child (Enter year of death of husband (wife) ▶ 19)

Exemptions — Regular / 65 or over / Blind — Enter number of boxes checked ▶ 1

6 Yourself ☐ ☐ ☐
7 Wife (husband) ☐ ☐ ☐
8 First names of your dependent children who lived with you

Enter number

9 Number of other dependents (from line 32) ▶ 0
10 Total exemptions claimed ▶ 1

Income

11	Wages, salaries, tips, and other employee compensation. (Attach Form W-2 to front. If unavailable, attach explanation)	11	8400
12a	Dividends (see pages 8 and 13 of Instr.) $ ..... 12b Less exclusion $ ..... Balance ▶	12c	0
	(If gross dividends and other distributions are over $200, list in Part I of Schedule B.)		
13	Interest income. [If $200 or less, enter total without listing in Schedule B / If over $200, enter total and list in Part II of Schedule B]	13	42
14	Income other than wages, dividends, and interest (from line 45)	14	0
15	Total (add lines 11, 12c, 13 and 14)	15	8442
16	Adjustments to income (such as "sick pay," moving expenses, etc. from line 50)	16	0
17	Subtract line 16 from line 15 (adjusted gross income)	17	

● **Caution:** If you have unearned income and you could be claimed as a dependent on your parent's return, see boxed instruction on page 7, under the heading "Tax-Credits-Payments." Check this block ☐.

● If you do not itemize deductions and line 17 is under $10,000, find tax in Tables and enter on line 18.

● If you itemize deductions or line 17 is $10,000 or more, go to line 51 to figure tax.

Tax, Payments and Credits

18 Tax, check if from: ☒ Tax Tables 1–12, ☐ Schedule D, ☐ Tax Rate Schedule X, Y, or Z, ☐ Schedule G or ☐ Form 4726 — 18 ✓ 1267

19	Total credits (from line 61)	19	0
20	Income tax (subtract line 19 from line 18)	20	✓ 1269
21	Other taxes (from line 67)	21	0
22	Total (add lines 20 and 21)	22	✓ 1267
23	Total Federal income tax withheld (attach Forms W-2 or W-2P to front) — 23 1,397		
24	1972 Estimated tax payments (include amount allowed as credit from 1971 return) — 24 0		
25	Amount paid with Form 4868, Application for Automatic Extension of Time to File U.S. Individual Income Tax Return — 25 0		
26	Other payments (from line 71) — 26 0		
27	Total (add lines 23, 24, 25, and 26)	27	✓ 1397

Bal. Due or Refund

28	If line 22 is larger than line 27, enter BALANCE DUE IRS (Pay in full with return. Make check or money order payable to Internal Revenue Service) ▶	28	✓ 130
29	If line 27 is larger than line 22, enter amount OVERPAID ▶	29	✓ —
30	Line 29 to be REFUNDED TO YOU ▶	30	✓ —
31	Line 29 to be credited on 1973 estimated tax — 31		

Foreign Accounts

Did you, at any time during the taxable year, have any interest in or signature or other authority over a bank, securities, or other financial account in a foreign country (except in a U.S. military banking facility operated by a U.S. financial institution)? ▶ ☐ Yes ☒ No
If "Yes," attach Form 4683. (For definitions, see Form 4683.)

Note: Be sure to complete Revenue Sharing (lines 33 and 34) on next page.

Write soc. sec. no. on Check or Money Order. Attach here

Sign here

Under penalties of perjury, I declare that I have examined this return, including accompanying schedules and statements, and to the best of my knowledge and belief it is true, correct, and complete. Declaration of preparer (other than taxpayer) is based on all information of which he has any knowledge.

✕ Your signature — Date

Preparer's signature (other than taxpayer) — Date

▶ Wife's (husband's) signature (if filing jointly, BOTH must sign even if only one had income)

Address (and ZIP Code) — Preparer's Exp. Ident. or

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Family making itemized deductions – Part-1

Form 1040 US Department of the Treasury / Internal Revenue Service
Individual Income Tax Return 1972

For the year January 1–December 31, 1972, or other taxable year beginning ..... 1972, ending ..... 19 .....

Please print or type

First name and initial (If joint return, use first names and middle initials of both) | Last name | Your social security number (Husband's, if joint return)
X | X | 217 46 1930

Present home address (Number and street, including apartment number, or rural route) | Wife's number, if joint return
X | 817 45 1935

City, town or post office, State and ZIP code | Occupation | Yours X | Wife's X
X

Please attach Copy B of Form W-2 here

Filing Status—check only one:

1 ☐ Single
2 ☒ Married filing joint return (even if only one had income)
3 ☐ Married filing separately. If wife (husband) is also filing give her (his) social security number and first name here.
4 ☐ Unmarried Head of Household
5 ☐ Widow(er) with dependent child (Enter year of death of husband (wife) ▶ 19)

Exemptions

	Regular	65 or over	Blind	Enter number of boxes checked
6 Yourself	☒	☐	☐	▶ 2
7 Wife (husband)	☒	☐	☐	

8 First names of your dependent children who lived with you (1) (2) — Enter number ▶ 2
9 Number of other dependents (from line 32) ▶ 0
10 Total exemptions claimed ▶ 4

Income

11	Wages, salaries, tips, and other employee compensation. (Attach Form W-2 to front. If unavailable, attach explanation)	11	13,840
12a	Dividends (see pages 6 and 13 of instr.) $ ..... 12b Less exclusion $ ..... Balance ▶	12c	0
	(If gross dividends and other distributions are over $200, list in Part I of Schedule B.)		
13	Interest income. [If $200 or less, enter total without listing in Schedule B. If over $200, enter total and list in Part II of Schedule B]	13	175
14	Income other than wages, dividends, and interest (from line 45)	14	0
15	Total (add lines 11, 12c, 13 and 14)	15	14,015
16	Adjustments to income (such as "sick pay," moving expenses, etc. from line 50)	16	0
17	Subtract line 16 from line 15 (adjusted gross income)	17	14,015

● **Caution:** If you have unearned income and you could be claimed as a dependent on your parent's return, see boxed instruction on page 7, under the heading "Tax-Credits-Payments." Check this block ☐.

● If you do not itemize deductions and line 17 is under $10,000, find tax in Tables and enter on line 18.

● If you itemize deductions or line 17 is $10,000 or more, go to line 51 to figure tax.

Tax, Payments and Credits

18	Tax, check if from: ☐ Tax Tables 1–12, Schedule D ☒ Tax Rate Schedule X, Y, or Z ☐ Schedule G or ☐ Form 4726	18	
19	Total credits (from line 61)	19	
20	Income tax (subtract line 19 from line 18)	20	
21	Other taxes (from line 67)	21	
22	Total (add lines 20 and 21)	22	
23	Total Federal income tax withheld (attach Forms W-2 or W-2P to front) — 23		
24	1972 Estimated tax payments (include amount allowed as credit from 1971 return) — 24		
25	Amount paid with Form 4868, Application for Automatic Extension of Time to File U.S. Individual Income Tax Return — 25		
26	Other payments (from line 71) — 26		
27	Total (add lines 23, 24, 25, and 26)	27	

Bal. Due or Refund

28	If line 22 is larger than line 27, enter BALANCE DUE IRS. Pay in full with return. Make check or money order payable to Internal Revenue Service ▶	28	
29	If line 27 is larger than line 22, enter amount OVERPAID ▶	29	
30	Line 29 to be REFUNDED TO YOU ▶	30	
31	Line 29 to be credited on 1973 estimated tax — 31		

Foreign Accounts

Did you, at any time during the taxable year, have any interest in or signature or other authority over a bank, securities, or other financial account in a foreign country (except in a U.S. military banking facility operated by a U.S. financial institution)? ▶ ☐ Yes ☐ No
If "Yes," attach Form 4683. (For definitions, see Form 4683.)

Note: Be sure to complete Revenue Sharing (lines 33 and 34) on next page.

Sign here

Under penalties of perjury, I declare that I have examined this return, including accompanying schedules and statements, and to the best of my knowledge and belief it is true, correct, and complete. Declaration of preparer (other than taxpayer) is based on all information of which he has any knowledge.

Your signature | Date | Preparer's signature (other than taxpayer) | Date

Wife's (husband's) signature (if filing jointly, BOTH must sign even if only one had income) | Address (and ZIP Code) | Preparer's Emp. Ident. or Soc. Sec. No.

Write soc. s. o. on Check or Money Order. Attach here ☐

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Family making itemized deduction – Part-2

Schedules A&B—Itemized Deductions AND Dividend and Interest Income

(Form 1040)
Department of the Treasury
Internal Revenue Service
▶ Attach to Form 1040.

1972

me(s) as shown on Form 1040 | Your social security number 217 46 1930

Schedule A—Itemized Deductions (Schedule B on back)

Medical and dental expenses (not compensated by insurance or otherwise) for medicine and drugs, doctors, dentists, nurses, hospital care, insurance premiums for medical care, etc.

1 One half (but not more than $150) of insurance premiums for medical care. (Be sure to include in line 10 below)	140	
2 Medicine and drugs	118	
3 Enter 1% of line 17, Form 1040	X	
4 Subtract line 3 from line 2. Enter difference (if less than zero, enter zero)	X	
5 Enter balance of insurance premiums for medical care not entered on line 1	140	
6 Itemize other medical and dental expenses. Include hearing aids, dentures, eyeglasses, transportation, etc.		
E.R. Smith MD.	7+	00
M.S. Snyder MD.	84	00
S. L. Myers (Dentist)	113	00
M. M. Miller (Opt.)	47	00
eye glasses	38	00
Transportation	18	00
7 Total (add lines 4, 5, and 6)	X	
8 Enter 3% of line 17, Form 1040	X	
9 Subtract line 8 from line 7. Enter difference (if less than zero, enter zero)	X	
10 Total deductible medical and dental expenses (Add lines 1 and 9. Enter here and on line 33, below.) ▶	X	

Taxes.

11 Real estate	418	
12 State and local gasoline (see gas tax tables)	72	
13 General sales (see sales tax tables)	104	
14 State and local income	0	
15 Personal property	0	
16 Other	0	
17 Total taxes (Add lines 11 through 16. Enter here and on line 34, below.) ▶	X	

Contributions.—Cash—including checks, money orders, etc. (Itemize—see instructions on page 11 for examples.)

Holy Church	250	00
United Fund	175	00
Boy Scouts	80	00
18 Total cash contributions		
19 Other than cash (see instructions on page 12 for required statement). Enter total for such items here	18	
20 Carryover from prior years	0	
21 Total contributions (Add lines 18, 19, and 20. Enter here and on line 35, below.) ▶	X	

Interest expense.

22 Home mortgage	850	
23 Installment purchases	34	
24 Other (Itemize) Personal loan	75	
25 Total interest expense (Add lines 22, 23 and 24. Enter here and on line 36, below.) ▶	X	

Casualty or theft loss(es) See instructions on page 12. NOTE: If you had more than one casualty or theft loss occurrence, OMIT lines 26 through 29 and see page 12 of the instructions for guidance.

26 Loss before adjustments	0	
27 Insurance reimbursement	0	
28 $100 limitation	$100	00
29 Add lines 27 and 28	0	
30 Casualty or theft loss. (Excess of line 26 over line 29. Enter here and on line 37, below.) ▶	0	
31 Child and dependent care expenses from Form 2441. (Enter here and on line 38, below.) ▶	684	

Miscellaneous deductions for alimony, union dues, etc. (see instructions on page 13).

Union Dues	235	00
Required Education	240	00
32 Total miscellaneous deductions (Enter here and on line 39, below.) ▶	X	

Summary of Itemized Deductions — A

33 Total deductible medical and dental expenses (from line 10)	X
34 Total taxes (from line 17)	X
35 Total contributions (from line 21)	X
36 Total interest expense (from line 25)	X
37 Casualty and theft loss(es) (from line 30)	X
38 Child and dependent care expenses (from line 31)	X
39 Total miscellaneous deductions (from line 32)	X
40 TOTAL ITEMIZED DEDUCTIONS. (Add lines 33 through 39. Enter here and on Form 1040, line 52.) ▶	X

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Itemized - Answer Key Part-1

Form 1040 US Department of the Treasury / Internal Revenue Service — Individual Income Tax Return — 1972

For the year January 1–December 31, 1972, or other taxable year beginning ..... 1972, ending ..... 19 .....

type / Please print

First name and initial (If joint return, use first names and middle initials of both) ✓ | Last name ✓ | Your social security number (Husband's, if joint return): 217 46 1930

Present home address (Number and street, including apartment number, or rural route) ✓ | Wife's number, if joint return: 817 45 1935

City, town or post office, State and ZIP code ✓ | County: Yours ✓ Wife's ✓

Please attach Copy B of Form W-2 here

Filing Status—check only one:

1 ☐ Single
2 ☒ Married filing joint return (even if only one had income)
3 ☐ Married filing separately. If wife (husband) is also filing give her (his) social security number and first name here.
4 ☐ Unmarried Head of Household
5 ☐ Widow(er) with dependent child (Enter year of death of husband (wife) ▶ 19)

Exemptions

	Regular	65 or over	Blind	Enter number of boxes checked
6 Yourself	☒	☐	☐	▶ 1
7 Wife (husband)	☒	☐	☐	

8 First names of your dependent children who lived with you (1) (2) — Enter number ▶ 2
9 Number of other dependents (from line 32) ▶ 0
10 Total exemptions claimed ▶ 4

Income

11	Wages, salaries, tips, and other employee compensation. (Attach Form W-2 to front. If unavailable, attach explanation)	11	13,840 00
12a	Dividends (see pages 6 and 13 of instr.) $ ..... 12b Less exclusion $ ..... Balance ▶ (If gross dividends and other distributions are over $200, list in Part I of Schedule B.)	12c	0
13	Interest income. [If $200 or less, enter total without listing in Schedule B. If over $200, enter total and list in Part II of Schedule B.]	13	175 00
14	Income other than wages, dividends, and interest (from line 45)	14	0
15	Total (add lines 11, 12c, 13 and 14)	15	14,015 00
16	Adjustments to income (such as "sick pay," moving expenses, etc. from line 50)	16	0
17	Subtract line 16 from line 15 (adjusted gross income)	17	14015 00

● **Caution:** *If you have unearned income and you could be claimed as a dependent on your parent's return, see boxed instruction on page 7, under the heading "Tax-Credits-Payments." Check this block* ☐.

● *If you do not itemize deductions and line 17 is under $10,000, find tax in Tables and enter on line 18.*

● *If you itemize deductions or line 17 is $10,000 or more, go to line 51 to figure tax.*

Tax, Payments and Credits

18	Tax, check if from: ☐ Tax Tables 1–12, ☐ Schedule D, ☒ Tax Rate Schedule X, Y, or Z, ☐ Schedule G or ☐ Form 4726		18	1245
19	Total credits (from line 61)		19	0
20	Income tax (subtract line 19 from line 18)		20	1245
21	Other taxes (from line 67)		21	0
22	Total (add lines 20 and 21)		22	1245
23	Total Federal income tax withheld (attach Forms W-2 or W-2P to front)	1025		
24	1972 Estimated tax payments (include amount allowed as credit from 1971 return)	0		
25	Amount paid with Form 4868, Application for Automatic Extension of Time to File U.S. Individual Income Tax Return	0		
26	Other payments (from line 71)	0		
27	Total (add lines 23, 24, 25, and 26)		27	1025

Bal. Due or Refund

28	If line 22 is larger than line 27, enter BALANCE DUE IRS (Pay in full with return. Make check or money order payable to Internal Revenue Service) ▶	28	220
29	If line 27 is larger than line 22, enter amount OVERPAID ▶	29	
30	Line 29 to be REFUNDED TO YOU ▶	30	
31	Line 29 to be credited on 1973 estimated tax | 31 |		

Foreign Accounts

Did you, at any time during the taxable year, have any interest in or signature or other authority over a bank, securities, or other financial account in a foreign country (except in a U.S. military banking facility operated by a U.S. financial institution)? ▶ ☐ Yes ☐ No
If "Yes," attach Form 4683. (For definitions, see Form 4683.)

Note: Be sure to complete Revenue Sharing (lines 33 and 34) on next page.

Write soc. sec. no. on Check or Money Order. Attach here

Sign here

Under penalties of perjury, I declare that I have examined this return, including accompanying schedules and statements, and to the best of my knowledge and belief it is true, correct, and complete. Declaration of preparer (other than taxpayer) is based on all information of which he has any knowledge.

▶ X Your signature — Date

▶ Preparer's signature (other than taxpayer) — Date

▶ X Wife's (husband's) signature (if filing jointly, BOTH must sign even if only one had income)

Address (and ZIP Code) — Preparer's Emp. Ident. or Soc. Sec. No.

Itemized - Answer Key Part-2

Schedules A&B—Itemized Deductions AND Dividend and Interest Income

(Form 1040)
Department of the Treasury
Internal Revenue Service
► Attach to Form 1040.

1972

Name(s) as shown on Form 1040 | Your social security number 217:46:1930

Schedule A—Itemized Deductions (Schedule B on back)

Medical and dental expenses (not compensated by insurance or otherwise) for medicine and drugs, doctors, dentists, nurses, hospital care, insurance premiums for medical care, etc.

1 One half (but not more than $150) of insurance premiums for medical care. (Be sure to include in line 10 below)	140	00
2 Medicine and drugs	118	00
3 Enter 1% of line 17, Form 1040	✓ 140	
4 Subtract line 3 from line 2. Enter difference (if less than zero, enter zero)	✓ 118	00
5 Enter balance of insurance premiums for medical care not entered on line 1	140	00
6 Itemize other medical and dental expenses. Include hearing aids, dentures, eyeglasses, transportation, etc.		
E R Smith MD.	74	00
M S Snyder MD.	84	00
S. L. Myers (Dentist)	113	00
m. m. Miller (Opt.)	47	00
Eye Glasses	38	00
Transportation	18	00
7 Total (add lines 4, 5, and 6)	✓ 772	00
8 Enter 3% of line 17, Form 1040	✓ 420	00
9 Subtract line 8 from line 7. Enter difference (if less than zero, enter zero)	✓ 352	00
10 Total deductible medical and dental expenses (Add lines 1 and 9. Enter here and on line 33, below.) ►	✓ 492	00

Taxes.

11 Real estate	418	00
12 State and local gasoline (see gas tax tables)	72	00
13 General sales (see sales tax tables)	104	00
14 State and local income	0	
15 Personal property	0	
16 Other	0	
17 Total taxes (Add lines 11 through 16. Enter here and on line 34, below.) ►	✓ 594	00

Contributions.—Cash—including checks, money orders, etc. (Itemize—see instructions on page 11 for examples.)

Holy Church	250	
United Fund	175	
Boy Scouts	80	
18 Total cash contributions		
19 Other than cash (see instructions on page 12 for required statement). Enter total for such items here	18	00
20 Carryover from prior years		
21 Total contributions (Add lines 18, 19, and 20. Enter here and on line 35, below.) ►	✓ 523	

Interest expense.

22 Home mortgage	850	
23 Installment purchases	34	
24 Other (Itemize) Personal loan	75	
25 Total interest expense (Add lines 22, 23 and 24. Enter here and on line 36, below.) ►	✓ 959	

Casualty or theft loss(es)
See instructions on page 12. NOTE: If you had more than one casualty or theft loss occurrence, OMIT lines 26 through 29 and see page 12 of the instructions for guidance.

26 Loss before adjustments	0	
27 Insurance reimbursement	0	
28 $100 limitation	$100	00
29 Add lines 27 and 28	0	
30 Casualty or theft loss. (Excess of line 26 over line 29. Enter here and on line 37, below.) ►	0	
31 Child and dependent care expenses from Form 2441. (Enter here and on line 38, below.) ►	684	00

Miscellaneous deductions for alimony, union dues, etc. (see instructions on page 13).

Union Dues	235	00
Required Education	240	00
32 Total miscellaneous deductions (Enter here and on line 39, below.) ►	✓ 475	

Summary of Itemized Deductions

A

33 Total deductible medical and dental expenses (from line 10)	✓	492
34 Total taxes (from line 17)	✓	594
35 Total contributions (from line 21)	✓	523
36 Total interest expense (from line 25)	✓	959
Casualty and theft loss(es) (from line 30)	✓	0
38 Child and dependent care expenses (from line 31)	✓	684
39 Total miscellaneous deductions (from line 32)	✓	475
40 TOTAL ITEMIZED DEDUCTIONS. (Add lines 33 through 39. Enter here and on Form 1040, line 42.) ►		3727

38

UNIT: Decimals

CONCEPT: Addition and subtraction of decimals are necessary in the food industry.

Career Education Activity	Activity Evaluation/Comments
"Hamburger" Restaurant Sales Slip (attached) STUDENT PROJECTS - 1. Have students give orders and compute the total cost of the orders. 2. Compute the tax on each order. 3. Construct a menu and price structure for food items. 4. Have students compute prices for multiple purchases. DISCUSSION - Why are most of the "order takers" at "Hamburger" restaurants young people? INTERVIEW - Have a student interview a person who worked in a restaurant and report to the class. RESOURCE PERSON - Invite the cafeteria manager to speak to the class. RESOURCE MATERIALS - 1. National Restaurant Association, 1530 N. Lake Shore Drive, Chicago, Ill. 60610 (Careers for Youth in the Food Service Industry) 2. Rochester Institute of Technology, Public Relations Office, Rochester, N. Y. 14608 (Careers in Food Services Administration) 3. National Assoc. of Food Chains, 1725 Wye St., N. W., Wash. D. C. 20006 (Looking for a Career?)	

80

81

NO OF ITEM	1	2	3	4	5	6	7	8
H'BURG	.25	.50	.75	1.00	1.25	1.50	1.75	2.00
¼LB H'BG	.60	1.20	1.80	2.40	3.00	3.60	4.20	4.80
DB H'BG	.50	1.00	1.50	2.00	2.50	3.00	3.50	4.00
C'BURG	.30	.60	.90	1.20	1.50	1.80	2.10	2.40
¼LB C'BG	.70	1.40	2.10	2.80	3.50	4.20	4.90	5.60
DB C'BG	.60	1.20	1.80	2.40	3.00	3.60	4.20	4.80
FILET	.40	.80	1.20	1.60	2.00	2.40	2.80	3.20
BIG B	.65	1.30	1.95	2.60	3.25	3.90	4.55	5.20
FRIES	.23	.46	.69	.92	1.15	1.38	1.61	1.84
X LARG	.39	.78	1.17	1.56	1.95	2.34	2.73	3.12
PIE	.20	.40	.60	.80	1.00	1.20	1.40	1.60
TR RIP	.20	.40	.60	.80	1.00	1.20	1.40	1.60
MUFFIN	.25	.50	.75	1.00	1.25	1.50	1.75	2.00
BLT	.60	1.20	1.80	2.40	3.00	3.60	4.20	4.80

NO OF ITEMS	1	2	3	4	5	6	7	8
C SHAKE	.30	.60	.90	1.20	1.50	1.80	2.10	2.40
S SHAKE	.30	.60	.90	1.20	1.50	1.80	2.10	2.40
V SHAKE	.30	.60	.90	1.20	1.50	1.80	2.10	2.40
COKE	.15	.30	.45	.60	.75	.90	1.05	1.20
X LARG	.20	.40	.60	.80	1.00	1.20	1.40	1.60
ORANGE	.15	.30	.45	.60	.75	.90	1.05	1.20
X LARG	.20	.40	.60	.80	1.00	1.20	1.40	1.60
ROOT BR	.15	.30	.45	.60	.75	.90	1.05	1.20
X LARG	.20	.40	.60	.80	1.00	1.20	1.40	1.60
MILK	.15	.30	.45	.60	.75	.90	1.05	1.20
CF CR	.15	.30	.45	.60	.75	.90	1.05	1.20
HT CHOC	.15	.30	.45	.60	.75	.90	1.05	1.20

382605

Sub Total

Sales Tax

TOTAL

☐ K M O Pi DBL ¼LB CB PL
☐ K M O Pi DBL ¼LB CB PL
☐ K M O Pi DBL ¼LB CB PL
☐ K TS CH PL FILET
☐ S L O Pi CH BIG B

Just like you ordered it!

382605

UNIT: Rational numbers - Decimals

CONCEPT: Multiplication of decimals is necessary in family finance - cost of raising a family.

Career Education Activity	Activity Evaluation/Comments

PROBLEM - When you take on the responsibilities of pet ownership, consider the costs to your family -

		expense	Yearly	10 - Yr.
1.	Food			
	a. Tablescraps	-		
	b. Canned food	89¢ wk.		
	c. Dry food	85¢ wk.		
2.	Veterinarian	-----	$10	
3.	License	-----	$ 2	
4.	Shelter	-----	$15	
	Total			

STUDENT PROJECT -

1. Write a cost estimate for other pets.
2. Students may wish to investigate various careers which center around animals.

RESOURCE MATERIALS -

1. Free Publications
   a. American Veterinary Medical Association, 600 S. Michigan Avenue., Chicago, Ill. 60605
      (1) Career facts about Veterinary Medicine
      (2) Today's Veterinarian
   b. American Public Health Assoc., 1740 Broadway, New York, N.Y. 10018 (Report on Educational Qualifications of Public Health Veterinarians)
   c. Virginia Polytechnic Institute, College of Agriculture. Blacksburg, Va. 24061 (Your Career in Animal Science)

2. Chronicle Guidance Publications
   a. Animal care occupations
   b. Animal husbandmen
   c. Veterinarian

Following is a sample family budget for a month, which may be used in the classroom. Students are given incomes and expenses to calculate for the month, with any money left-over to be deposited in a savings account.

Receipts for the Robert Parry family are shown below for the month of July.

Date		Explanation	Amount	
19 July	1	Robert Parry-take home salary	185	00
	1	Robert Parry-overtime pay	35	25
	2	Carolyn Parry-take home salary	53	29
	4	Life Insurance Dividend	24	82
	5	Bank interest payment	18	24
	6	Sale of lawn mower	15	00
	6	Bingo Winnings	4	45
		Total		

Cash Payment records

Date		Explanation	Amount	
19 July	1	Mortgage payment	84	50
	1	Car insurance	24	75
	3	Groceries	23	14
	4	Boat rental	13	45
	4	Meal expenses	32	84
	5	Clothing	24	75
	5	Savings Act.	50	00
	5	Gas	10	45
		Total		

The Parrys deposit the balance of their monthly income in the bank by mail. Write a check to the Bank (your school) for the amount to be deposited.

134

_____ 19_____

Pay to the
order of _____ $_____

_____ Dollars

1st Bank of Md.
Memo_____ _____

o5o11o732100:8

UNIT: Rational Numbers (Decimals)

CONCEPT: Decimals are necessary in family finance - cost of raising a family.

Career Education Activity	Activity Evaluation/Comments

STUDENT PROJECT

1. Have each student make an estimate of the amount of money his parents spend on him alone, according to the categories in the chart for #2.

2. Below are average costs per child. Let students compare their estimates.

Per child items	Rates	Per Year	Total	For 21 yrs
Food	$1.85 per day			
Clothing	$12.50 per month			
Education				
a. K-12	$2.08 per month			
b. College (4 yr.)	$4,000. per year			
Room	$15.00 per month			
Medical	$ 8.00 per month			
Misc.	$23.00 per month			

Note - These figures are not documented and may be changed, according to teacher.

UNIT: Rational Numbers - Decimals

CONCEPT: Addition and subtraction are important in the field of advertising.

Career Education Activity	Activity Evaluation/Comments
STUDENT PROJECT - You are the manager of a small appliance store. In order to be successful, you need to make your store known to the community. You can do this by advertising in various media. Using newspapers, find the costs for advertisements. Attached is a schedule of rates for a radio station and television station. Teachers and students may make up their own problems. RESOURCE MATERIALS - 1. If your school has Chronicle Guidance Publications, you may wish to refer to - a. General salesman b. Sales clerk c. Wholesale trade salesman d. Salesman, manufacturer's e. Advertising assistant f. Department store occupations 2. Free publications a. Association of Industrial Advertisers, 41 E. 42nd St., New York N. Y. 10017 (Careers in Industrial Advertising) b. American Advertising Federation, 1225 Conn. Ave., Wash., D. C. 20016 (Jobs in Advertising) c. National Assoc. of Direct Selling Companies, 165 Center St., Winona, Minn. 55987 (Direct Selling and the Direct-to-consumer Salespeople) d. Council on Opportunities in Selling, Inc., 630 Third Ave., New York, N. Y. 10017 (Opportunities in Selling) e. Sales and Marketing Executives-International, Career Service Division, 630 Third Ave., New York, N. Y. 10017 (Sales Careers)	

RATE CARD NO. 9

EFFECTIVE JANUARY 1, 1972

1000 WATTS AM
3000 WATTS FM
(STEREO)

60 SECOND ANNOUNCEMENTS

7946

NO. PER WEEK	AA	A	FM
1	$6.00	$4.80	$3.75
6	5.50	4.40	3.30
12	5.00	4.00	2.75
18	4.50	3.60	2.40
24	4.00	3.20	2.25
30	3.50	2.80	2.00

30 SECOND ANNOUNCEMENTS

NO. PER WEEK	AA	A	FM
1	$4.80	$3.80	$2.90
6	4.40	3.50	2.50
12	4.00	3.20	2.10
18	3.60	2.80	1.90
24	3.20	2.55	1.70
30	2.80	2.25	1.50

10 SECOND ANNOUNCEMENTS

NO. PER WEEK	AA
1	$2.75
6	2.45
12	2.30
18	2.00
24	1.75
30	1.60

DISCOUNTS	
13 CONSECUTIVE WEEKS	5%
26 CONSECUTIVE WEEKS	10%
62 CONSECUTIVE WEEKS	15%

IMPACT PLAN NO. 1 (ROS)AM ONLY

NO. PER WEEK	60	30
12	$54.00	$43.20
18	72.00	55.80
24	86.40	68.40

IMPACT PLAN NO. 2 (ROS)AM and FM COMBO

COMBO PER WEEK	60	30
12	$42.00	$32.00
18	54.00	35.00
24	66.00	51.00

IMPACT PLAN NO. 3 (WEEKENDER SPECIAL AM ONLY) ROS

SAT-SUN COMBO	60	30
12	$50.00	$36.0(
18	68.00	51.00
24	72.00	54.00

5 MINUTE PROGRAMS

TIMES	1-3 PER WEEK	4-7 PER WEEK
13 Weeks	$6.60	$6.25
26 Weeks	6.30	5.90
39 Weeks	5.95	5.75
52 Weeks	5.60	5.35

PROGRAM TIME RATES

	1 HOUR	½ HOUR	¼ HOUR
1 Time	$70.00	$36.00	$18.00

RATES FOR TELEVISION ADVERTISING

AAA-7:30-11:00 PM

Seconds	(ex. preceding news) Fixed Times	(Fixed time when a vacancy exists 2 week	immediate (anytime in time bracket)
60	280	$200	$150
30	140	100	75
10	70	50	35

AA-5:30-7:30 PM 11:00-11:30

60	100	80	50
30	50	40	
10	25	20	12

A-10:30-5:30

60	80	60	40
30	40	30	21
20	20	15	10

Class B-All other times

60	50	40	30
30	25	20	15
10	12	10	9

UNIT: Rational Numbers - Decimals

CONCEPT: Decimals are necessary in computing hourly wages - payroll.

Career Education Activity

PROBLEM -

Employee	Job	Hourly Wage	Wages for 40 hours	Over-time hours	1½x	Sunday Rate hours	2x	Weekly Wage
Bill	Laborer	2.75		8		8		
Mary	Secretary	2.80		0		0		
John	Chemist	5.75		4		4		
Tom	Engineer	5.50		8		8		

DISCUSSION - Why do you think workers are paid overtime? Is this good or bad?

RESOURCE MATERIAL -

1. Free publications
   a. American Society for Personnel Administration, 52 E. Bridge St., Berea, Ohio 44017 (Careers in Personnel and Industrial Relations)
   b. Public Personnel Assoc., 1313 E. 60th St., Chicago, Ill. 60637 (Your Career in Public Personnel Administration)

2. Chronicle Guidance Publications
   a. Personnel supervisor
   b. Rehabilitation Counselor

Activity Evaluation/Comments

UNIT: **Decimals**

CONCEPT: **Decimals are necessary in business - payroll.**

Career Education Activity	Activity Evaluation/Comments

PROBLEM - Tom Myers is a payroll clerk for a city. Each week he must compute the pay for the following employees-

Name	Job	Wage Per Hour	Hours Worked	Pay*
Bill	Chemist	$4.26	35	?
Bob	Bookkeeper	$2.91	40	?
Henry	Custodian	$2.59	45	?
Mary	Cashier	$2.91	?	$116.40
John	Purchasing agent	$2.97	30	?
Jane	Data Processing	$3.62	37	?
Joe	Lab Technician	$3.18	19	?
Mike	Inspector-Constr.	$3.84	?	$161.28
Ron	Electrician	$3.68	40	?
Ann	Secretary	$3.22	?	$132.02

STUDENT PROJECT - Using the Classified Ads from newspapers, develop similar activities based on wages.

DISCUSSION -

1. Have a discussion on working for pay. Is that the major concern when looking for jobs? What other aspects of the job should be considered?
2. Why do some seasonal workers receive such high pay? (construction trades.)

STUDENT PROJECT -

1. Have students write Want Ads for a payroll clerk for your business.
2. Have a committee of students estimate the labor costs of constructing a small building. Use the classified section of a newspaper for types of jobs and wages.

*Based on normal hourly wage scale.

Discuss overtime concept with students. (1½ x or 2 x).

UNIT: Rational Numbers - Decimals

CONCEPT: Decimals are necessary to a mechanic.

Career Education Activity	Activity Evaluation/Comments

PROBLEM - A thickness gauge is used by an automobile mechanic to measure small openings. A typical gauge would contain blades of the following thicknesses (in fractions of an inch).

(1)	.0015	(2)	.002	(3)	.003	(4)	.004	(5)	.005	(6)	.006
(7)	.007	(8)	.008	(9)	.009	(10)	.010	(11)	.011	(12)	.012
(13)	.013	(14)	.014	(15)	.016	(16)	.018	(17)	.020	(18)	.024
(19)	.025	(20)	.028	(21)	.030	(22)	.032	(23)	.035		

1. Assuming there are 23 blades, what is the thickness of the tool?
2. How much thicker is blade #23 than #1?
3. About how many times as thick is #23 than 1?

RESOURCE PERSON - Invite an automobile mechanic to speak with the class about his job. He should especially point out tools he uses involving measurement.

STUDENT PROJECTS -

1. Ask a student to bring to class a "feeler gauge" or "gap gauge" and show it to the class.
2. There are many careers in the auto industry. Have students report on these and bring to class the tools they may use.

UNIT: Rational Numbers - Decimals

CONCEPT: Decimals are necessary in business travel.

Career Education Activity	Activity Evaluation/Comments

PROBLEM - A business is training an accountant . He is required to visit branch offices across the country. He is given an allowance for expenses such as food, travel, and lodging. During 1st week, he spent the following:

Day	Food Spent/Allowance	Travel Spent/Allow.	Lodging Spent/Allow.
M.	$12.85 / $11	$ 9.37 / $10	$15 / $17
T.	$10.75 / $11	$ 8.42 / $10	$22 / $17
W.	$10.85 / $11	$11.47 / $10	$19 / $17
Th.	$ 9.25 / $11	$ 8.65 / $10	$14 / $17
F.	$11.50 / $11	$10.70 / $10	$15 / $17

Sub-Totals $_____ Food $_____ Travel $_____ Lodging
Total Expenses_____
Total Allowance _____

DISCUSSION - Many jobs involve traveling. Discuss such jobs and their advantages and disadvantages.

STUDENT PROJECT - Have students choose a job involving travel and make up a travel log similar to the one in example #1. Guide lines may be given for amounts to be allowed for food, travel and lodging.

DISCUSSION - Careers involving extensive travel are very desirable - staying in motel, eating in restaurants.

RESOURCE MATERIAL -
Free publications
a. United Business Schools Association, 1101 17th St., N.W. Wash. D.C. 20036 (Accounting for Your Future)
b. Aluminum Company of America, 1501 Alcoa Bldg., Pittsburgh, Pa. 15219 (Careers in Controllership)

UNIT: Rational Numbers - Decimals

CONCEPT: Decimals are necessary in keeping a checking account.

Career Education Activity	Activity Evaluation/Comments

PROBLEM - A checking account is a good way of keeping a record of expenses. A typical bank statement may be similar to the following:

April			May			June		
Deposit	Expense	Balance	Deposit	Expense	Balance as of Apr. 30	Deposit	Expense	Balance as of May 31
		50.00						
	13.50							
	12.76							
78.12								
	43.15							
		Balance as of April 30			Balance as of May 31			Balance as of June 30

STUDENT PROJECT - Have students bring in sample bank statements.

DISCUSSION - Discuss restrictions on some checking accounts, service charges, minimum balance and others.

STUDENT PROJECTS

1. Teachers may be able to obtain sample checks or use the printed form used to write checks for hypothetical purchases made from a mail order catalog.
2. Attached is a sample family's income and expenses for a month.

RESOURCE MATERIALS

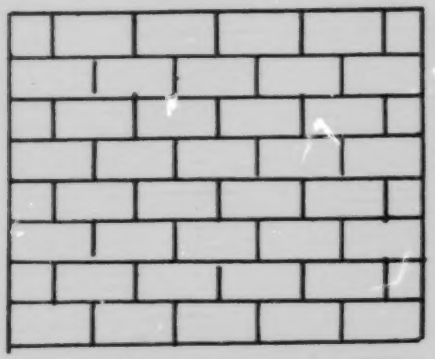
1. Free publications
   a. American Bankers Assoc., 90 Park Ave., New York, N.Y. 10016 ("Banking-a-career for today and tomorrow" and "Banking- An Opportunity for You")

UNIT: Rational Numbers - Decimals

CONCEPT: Decimals are necessary in masonry.

Career Education Activity	Activity Evaluation/Comments

(1) The bricklayer should be able to do simple mathematical problems, take measurements accurately, and read blueprints.
   (a) How many bricks will be required to build a wall according to the following "blueprint?"



Brick size 2"x8"

(can vary with type of brick)

   (b) According to the above blueprint, what will be the dimensions (length, width, height) of the wall when it is finished?

   (c) If each brick costs 12¢, how much would the bricks for the above wall cost?

   (d) A mason who is self-employed must be able to keep accurate records. Complete the worksheet for the above job. (attachment)

(2) Complete the job according to the directions at the learning center. (The directions will have to be written by the classroom teacher according to their needs.)

*Note: "Seconds" or "rejects" (bricks) could probably be obtained free or for a small charge at a local brick manufacturing factory.
Check with your local Masonry instructor to see what type mortar mixture should be used so that it can be removed from the bricks so they can be used again.

Worksheet

Date _____

Type of job: (building brickwall, fireplace)

Materials needed:

		Cost
a- bricks -	@ (12c each)	$
b- mortar -	@ ($2.50/bag)	$
c-sand -	@ ($7.00/ton)	$
Labor - _____ hours x (7.50) per hour		
Total labor cost $_____		$
Miscellaneous expenses		
1-		$
2-		$
3-		$_____
Total charge for completed work.		$ _____

Signature _____

UNIT: Rational Numbers - Decimal (Learning Center)

CONCEPT: Decimals are necessary in transportation.

Career Education Activity	Activity Evaluation/Comments
Below are some of the realistic problems that a bus driver meets daily in his or her job. Would you make a good bus driver? 1. According to ICC law, a school bus with 18 double seats (seats on which 2 people can sit) is permitted to transport 54 pupils. a. If all seats are full, how many students are standing in the aisle if there are 48 students on the bus? 53? 37? 46? 2. The standard charge for school bus transportation is 50¢ per mile. a. How much will it cost a group hiring your bus to go: 1-266 miles? 2-121½ miles? 3-79 miles? 4-425 miles? b. If the group hiring the bus wants to share the cost equally among the number of passengers on the bus, how much would each have to pay to go 178 miles if: 1-There were 38 passengers sharing the cost? 2-There were 50 passengers sharing the cost? 3-There were 15 passengers sharing the cost? 3. Except for emergencies, the law permits a bus driver or truck driver to drive only 12 hours in a 24 hour period. Complete the following bus driver's log, assuming that he drives 12 hours each 24 hour period.	

UNIT: Rational Numbers - Decimal (Learning Center)

CONCEPT: Decimals are necessary in transportation.

Career Education Activity

3. cont'd

I.

Date	Total miles to be traveled during the trip	Avg. miles traveled each hour	Time trip started	Time driver must stop driving	Miles traveled today	Miles Remaining to be traveled
July 1	1200	60	6:53a.m.	--	--	--
July 2		35	8:08a.m.	--	--	--
July 3		40	10:38a.m.	--	--	--

II.

Aug. 8	3876	65	6:43a.m.	--	--	--
Aug. 9		58	10:00a.m.	--	--	--
Aug. 10		60	11:26a.m.	--	--	--
Aug. 11		57	7:30a.m.	--	--	--

Activity Evaluation/Comments

UNIT: Rational Numbers - Decimal (Learning Center)

CONCEPT: Decimals are necessary in transportation.

Career Education Activity	Activity Evaluation/Comments

4. For the next 3 weeks you are going to be driving a bus from Frostburg, Maryland to Yellowstone, National Park, Wyoming. Using the information given, complete the following chart.

State	Speedometer reading when entering state	Speedometer reading when leaving state	Miles traveled in this state	Total miles traveled to date (at the end of this day)
Maryland	18,219	18,232	-	-
Pennsylvania	18,232	18,342	-	-
Ohio	18,342	18,550	-	-
Indiana	18,550	18,665	-	-
Illinois	18,665	18,862	-	-
Missouri	18,862	19,118	-	-
Kansas	19,118	19,408	-	-
Colorado	19,408	19,828	-	-
Wyomirg	19.828	19,921	-	-

5. What are the advantages of being a bus driver? What are the disadvantages?

6. If you are still interested in being a bus driver or truck driver, ask the teacher to arrange an interview for you with a local bus or truck driver. Be prepared-write some questions that you want to discuss with him.

UNIT: Rational Numbers - Decimal (Learning Center)

CONCEPT: Decimals are necessary in transportation.

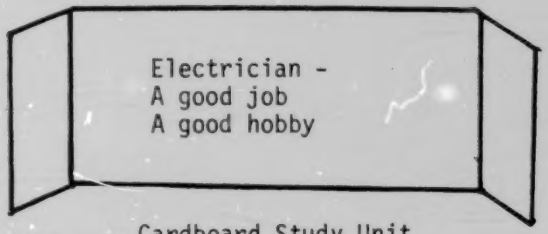
Career Education Activity	Activity Evaluation/Comments
7. Have the pupils discuss trips they have taken. RESOURCE MATERIALS that could be used at this center: 1. Library books related to bus driving, truck driving 2. Provide a travel map and have a student map out a trip of his own choice. Discuss the trip with him and ask him why he selected that specific route. Ask related math questions. 3. Arrange for a bus or truck company official to talk with the class and perhaps even arrange for a field trip that would involve a ride on a bus. 4. Filmstrips, films, or tapes related to bus or truck drivers (Refer to your local AV guide.)	

UNIT: Ratios and Proportions - Learning Station

CONCEPT: Ratios and proportions are important in the construction industry-electrician.

Career Education Activity	Activity Evaluation/Comments

Activity Sheets and pictures related to electricians and their tools



Cardboard Study Unit

Directions for completion of this center and list of resource materials

STUDENT PROJECTS - Construct a model house using ½" plywood. (see attachment) Provide materials and have pupils wire the house according to specific directions, such as:

1. Room 1-Using 1 socket, 1 battery, and 2 wires, wire a simple circuit. Room 2-Using 2 sockets, battery, and wires, wire a series circuit. Room 3-Using 3 sockets, battery, and wires, wire a parallel series circuit.

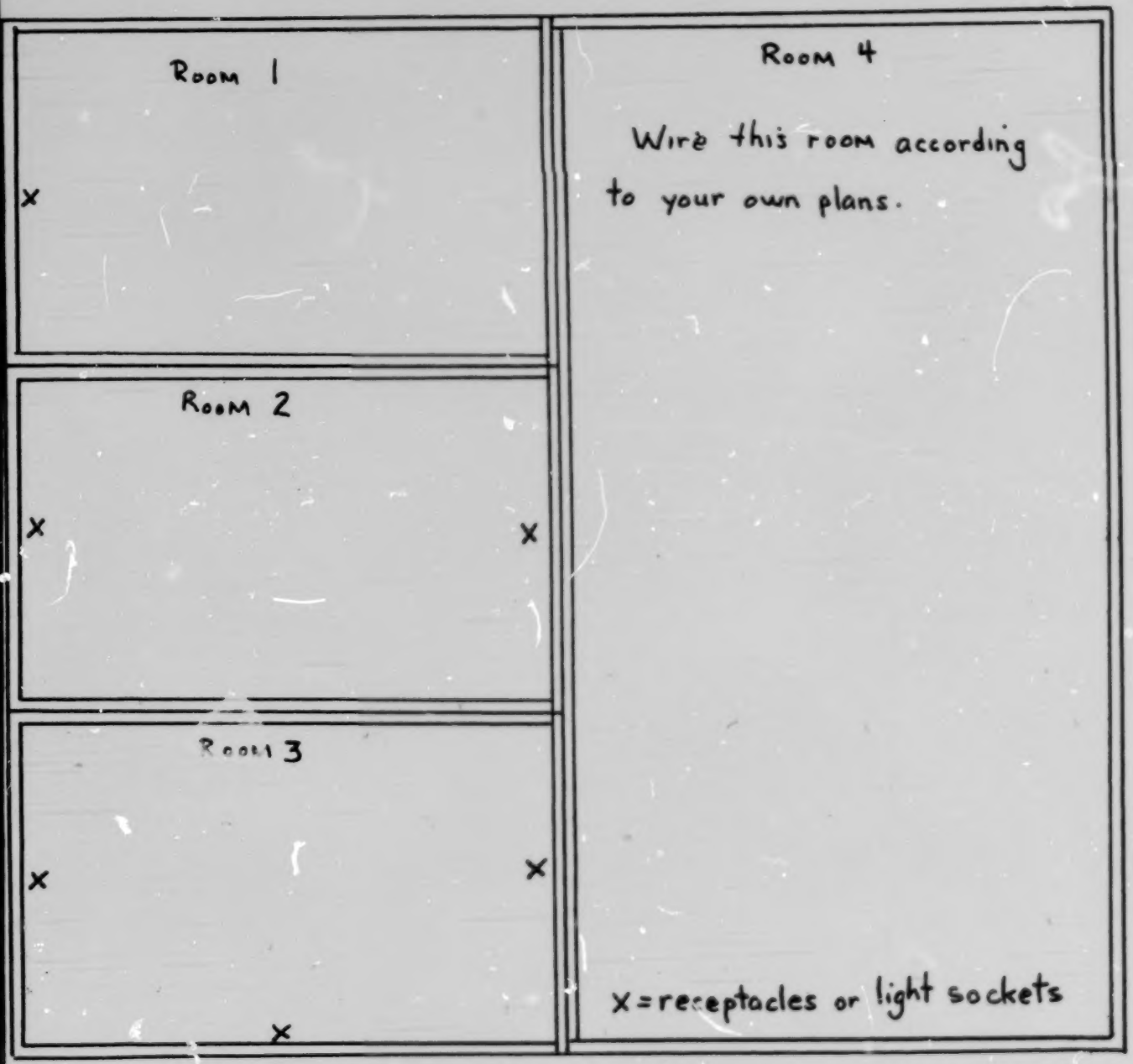
2. Using the scale 1" = 2' estimate the amount of wire (12/3) that you will need to wire each of the rooms. (Remember, you must place the socket at a location which you have chosen, and allow some extra wire to go to the breaker in the control panel which is usually located in the basement of all houses.) After you have completed wiring the room, check to see how accurate your estimate is to the actual amount of wire needed.

3. Wire the entire house, using parallel series circuits in every room. Estimate the amount of wire needed if each room has one socket. Does each circuit work? If not, locate the problem and correct the situation.

UNIT: Ratios and Proportions - Learning Station

CONCEPT: Ratios and proportions are important in the construction industry-electrician.

Career Education Activity	Activity Evaluation/Comments
4. Make a list of ways in which an electrician uses math. RESOURCE MATERIALS (1) Books and pamphlets related to electricity, specially books which use and explain the vocabulary words used in basic electricity and related processes (2) Construction blueprints or wiring diagrams (3) Filmstrips or films related to electricity (4) Visits by resource personnel (county engineer, maintenace supervisor)	



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The overall dimensions of this model can be adjusted to your particular classroom needs.

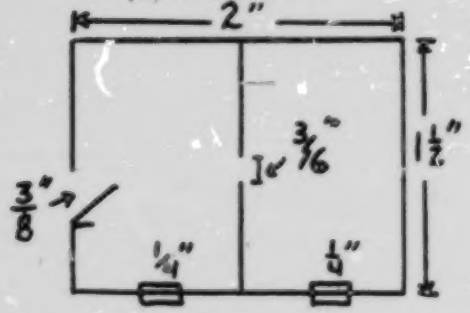
UNIT: Ratios and Proportions

CONCEPT: Ratio and Proportions are important in drafting - scale drawing.

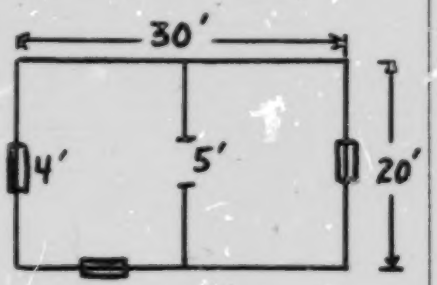
Career Education Activity	Activity Evaluation/Comments

PROBLEM - Given the scale 1/8" = 2", use the following drawings and compute the correct measurements.

1. Compute -
   (a) Length and width of building
   (b) Inside doorway
   (c) Outside doorway
   (d) Windows



2. Find what scale length the following would be -
   (a) Length of building
   (b) Width of building
   (c) Outside door
   (d) Inside door
   (e) Largest window
   (f) Small windows



RESOURCE MATERIALS -

1. Free publications
   a. General Motors Corp., Detroit, Mich. 48202 (Can I Be A Draftsman?)
   b. Society of Reproduction Engineers, 305 S. Andrews Ave. Suite 610 Fort Lauderdale, Florida 33301 (Careers in Graphic Reproductions)
   c. American Institute for Design and Drafting, 305 S. Andrews Ave., Suite 610, Fort Lauderdale, Florida 33301 (Drafting as a Career)
   d. American Institute of Architects, 1735 New York Ave., N.W. Wash. D.C. 20006 (Designing a Better Tomorrow - A Career in Architecture)

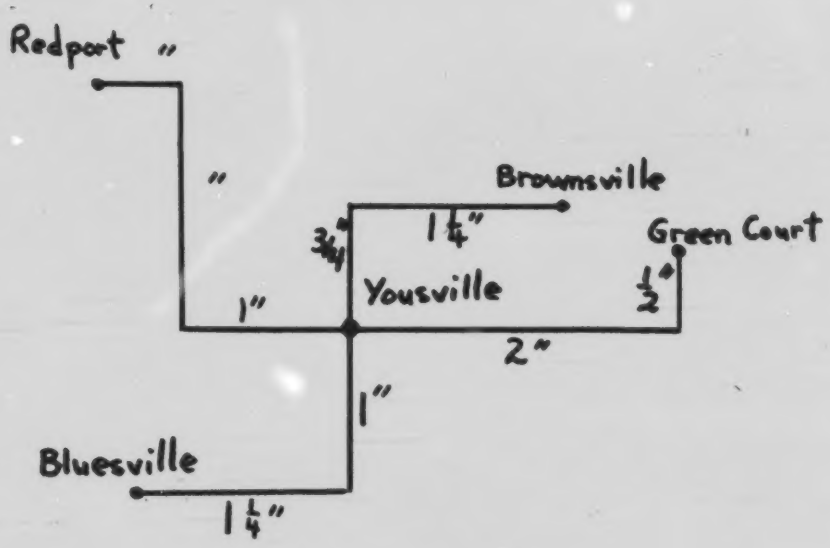
UNIT: Ratios and Proportion

CONCEPT: Ratios and proportions are important in cartography - map skills.

Career Education Activity	Activity Evaluation/Comments

PROBLEM - Using the map and scale, find the distances between the following towns:

a. Bluesville and Green Court
b. Bluesville and Brownsville
c. Yousville and Redport
d. Redport and Green Court
e. Redport and Bluesville (round trip)



Scale: ¼" = 8 miles

UNIT: Ratios and Proportion

CONCEPT: Ratios and proportions are important in cartography - map skills.

Career Education Activity	Activity Evaluation/Comments
STUDENT PROJECTS - 1. Have students draw a map showing the route they follow to go from their homes to school, using a given scale. 2. List occupations in which maps are used. 3. How is map reading important in non-occupational areas? RESOURCE MATERIALS - If your school has Chronicle Guidance Publications, you may wish to refer to the one on cartographers.	

UNIT: Percent

CONCEPT: Percent is necessary in computing personal finance - sales taxes.

Career Education Activity	Activity Evaluation/Comments
PROBLEM - You are a clerk in a retail store. When adding up a customer's bill, you must be able to compute the amount of sales tax to be added to the bill. Sales tax is usually figured by a given percent of the total amount. For example, if a bill totals $6.75, what would the tax be if the rate is 4%? 6%? STUDENT PROJECTS - Provide a catalog for the class. Let each student make up an order and compute the amount of sales tax to be added to his bill. Have students list various taxes, how they are computed, and uses of the tax money. DISCUSSION- Why pay taxes? For what are they used? RESOURCE MATERIALS National Association of Retail Grocers of the United States, 360 Michigan Ave., Chicago, Ill. 60601 (Career Opportunities in Food Retailing).	

The following are samples of sales slips that may be completed by students. Their purposes are to give practice in addition and subtraction of decimals and in computing sales tax.

Date_____19__			
Sold to _____			
Address _____			
Clerk	Amt. Rec'd	Terms	
	Tax		
Total			

ABC Sports Center 2577 Washington St.			
Date_____19__			
Sold to _____			
Address _____			
Clerk	Amt. Rec'd	Terms	
1	uniform	28	15
1	baseball glove	8	95
	Tax	1	48
Total			

Item	Price	Tax 3%	Total Cost	4%	Total Cost	5%	Total Cost	6%	Total Cost

UNIT: Percent

CONCEPT: Percent is necessary in personal finance.

Career Education Activity	Activity Evaluation/Comments

PROBLEMS

1. Suppose you invested $100 in a savings account that pays 4% annual interest. At the end of 1 year, you will have earned $4.00 interest. If you leave both the investment of $100 and the interest of $4.00 in the account during the 2nd year, you will receive interest of 4% for the combined total of $104. This is called compound interest; the interest is computed on the original investment and the interest it has earned.

   Find the compound interest for the following amounts over a 5-year period at a 5% annual interest rate.

$100	$1000	$5000
1.		
2.		
3.		
4.		
5.		

2. If your parents won $50,000 in the state lottery and invested it all in a savings account, how much interest would they earn at various interest rates?

RESEARCH - Investigate the different types of savings accounts. For example, pass book, savings certificates, etc.

RESOURCE PERSON - Have a resource person come in and discuss the purpose of savings certificates and various types of accounts.

RESOURCE MATERIAL

Free publications

a. American Bankers Assoc., 90 Park Ave., New York, N. Y. 10016 (Banking - A Career for Today and Tomorrow)
b. National Assoc. of Bank-Women; Public Relations Office 60E. 42nd St., New York, N.Y. 10017 (A Career for Women in Banking)

UNIT: Percent

CONCEPT: Percent is necessary in personal finance.

Career Education Activity	Activity Evaluation/Comments
STUDENT PROJECTS 1. Have students keep a list of personal expenses for a week. They may find what percent of their total expenses each item is. Then, find what percent would be termed essential and what percent is termed non-essential. 2. Make a pie-graph showing percents of expenses above. 3. Research percent of income that an average family of 4 spends on general areas, such as clothing, food, shelter, recreation, etc. 4. Prepare a bulletin board relating to numbers 1 and 2.	

UNIT: Percent

CONCEPT: Percent is necessary in computing interest rates in finance.

Career Education Activity	Activity Evaluation/Comments

PROBLEMS

1. To buy a home, you wish to borrow $20,000 at an 8% annual interest rate over a period of 20 years. The amount of debt at the end of each year is as follows:

	Amt. of Debt after year	Total Yrly. Payment	Total Yrly. Interest Chge.	Total Yrly. Principal Paid
1.	19,578			
2.	19,120			
3.	18,624			
4.	18,086			
5.	17,506			
6.	16,876			
7.	16,194			
8.	15,454			
9.	14,654			
10.	13,792			
11.	12,850			
12.	11,834			
13.	10,734			
14.	9,542			
15.	8,250			
16.	6,852			
17.	5,338			
18.	3,698			
19.	1,912			
20.	0			

2. Have students compute total amount paid in interest and total amount paid for the loan.

DISCUSSION - Make a comparison between renting and buying homes.

REPORTS - Have students report on careers in hotel and apartment management.

UNIT: ? Percent

CONCEPT: Percent is necessary in personal services - tipping.

Career Education Activity	Activity Evaluation/Comments
PROBLEMS 1. You are a waiter or waitress in a restaurant. You receive an average of 15% in tips. If, during a week, you sold food items totaling $328.00, what could you expect to receive in tips? 2. Make up similar problems, using varying rates. DISCUSSION 1. List some jobs that involve tipping. 2. Discuss: What general kinds of jobs usually require tipping? Why is it beneficial for a customer to have a waitress who gets part of her pay from tips as opposed to a salary? Why is it a benefit to the waitress? RESOURCE PERSON - Invite someone from a restaurant to speak to the class. RESOURCE MATERIAL Chronicle Guidance Publications a. Waiter (waitress) b. Restaurant managers c. Beauty operator d. Barber	

UNIT: Percent

CONCEPT: Percent is necessary in Consumerism - credit buying.

Career Education Activity	Activity Evaluation/Comments

PROBLEM -

1. You are using a credit card to make purchases at a department store. Compute the interest charges and total financed price.

Item Charged	Item Price	Interest Per Year at 18%	Total Annual Financed Price
Portable TV	$205		
Men's Suit	$ 85		
Tires	$175		
Lawn Mower	$450		
Vacuum Cleaner	$ 40		

2. A total charge of $205 is paid off on time. How long will it take to pay off the charge? Complete the chart. Paying $10 monthly, the rate is 18% yearly or 1½% monthly.

Balance Due	Interest Charged	Payment	Amount Applied To Principal	New Balance
$205		$10		

UNIT: Percent

CONCEPT: Percent is necessary in Consumerism - credit buying.

Career Education Activity	Activity Evaluation/Comments
BULLETIN BOARD, COMMITTEE REPORT - Have students prepare a bulletin board or committee reports on how credit cards work. STUDENT PROJECTS 1. A sample credit application may be brought to class. 2. Have students draw examples of credit cards. DISCUSSION - Have a discussion on the value of buying items on credit, the disadvantages. RESOURCE MATERIAL - If your school has Chronicle Guidance Publications, you may wish to refer to the one on Credit managers.	

UNIT: Percent

CONCEPT: Percent is necessary in consumerism - discounts.

Career Education Activity

PROBLEM

	Baseball Bats	Fishing Pole	Tennis Balls	Lawn Mower	Books	Tent	Electric Saws
Regular Price	$10	$25	3/$2	$306	$48	$48	$49.50
Discount	1/5	$12	10%	75%	2%		15%
Sale Price							

1. What would the discount price be for the following:
   a. 3 bats?
   b. 5 books?
   c. 2 fishing poles?
   d. 1 lawn mower?
   e. 1 of each of the total list of items above?

2. How much do you save on each of the following if you buy at the discount price:
   a. 3 tennis balls?
   b. 1 tent?
   c. 1 electric saw?
   d. 3 bats?

DISCUSSION - Discuss with students why items might be on sale.

Activity Evaluation/Comments

UNIT: Percent

CONCEPT: Percent is necessary in business - profit.

Career Education Activity	Activity Evaluation/Comments

PROBLEM - Markup is the difference between cost and selling price. If an article costs $4 and sells for $5, the markup is $1. The % of markup can be computed with reference to either cost or selling price. Many manufacturers and small retail outlets compute markup percent with reference to cost; most large retail outlets compute markup with reference to selling price. For example, a department store purchases an item wholesale for $25 and sells it for $30. What is the markup? Find the markup % on cost, On selling price

DISCUSSION - Obtain discount catalogs and discuss the percent of markup if items are bought retail.

STUDENT PROJECT - Have students decide on an article to make, such as yarn crafts, baked goods, and others ; then sell at a profit. Keep a record.

Quantity	No. Items	Cost to make	Selling Price	% Profit	Total Profit

RESOURCE MATERIALS

American Collegiate Retailing Association, Rochester Institute of Technology, College of Business, P.O. Box 3407, Rochester, N.Y. 14614 (Careers in Retailing)

UNIT: Percent

CONCEPT: Percent is necessary in retailing profits.

Career Education Activity	Activity Evaluation/Comments

PROBLEM - You are the owner of a retail store. You must earn at least $100 profit daily in order to meet expenses (rent, utilities, employee salaries and others) and provide an income for yourself. On a given day, you sold 1 each of the following items.

Item	Price	Pct. of Profit	Profit
Color TV	$595.00	15	
B & W TV	$143.00	5	
Radio	$ 38.95	9	
Tape player	$ 43.95	11	
Stereo	$249.99	8	

Taking the percent of profit on each item, find profit for each, and the total profit for the day. Have you met your income requirements?

STUDENT PROJECT - Have students bring in advertisements for sales. Make tables relating to discount prices, percent of discount, and regular prices, such as:

Item	% discount	regular price	saving	sale price

UNIT: Percent

CONCEPT: Percent is necessary in retailing profits.

Career Education Activity	Activity Evaluation/Comments
DISCUSSION - What other types of jobs depend on profits and commissions? PROBLEM - If a potato chip manufacturer sells a bag of chips for 89¢ and makes a 3% profit on each bag, how many bags does he have to sell to make a $50 profit? RESOURCE MATERIAL - For free publications and other resources, refer to other activities on banking (checking accounts, savings account, mortgages, and others.)	

UNIT: Percent

CONCEPT: Percent is necessary in computing statistical data on availability of occupations.

Career Education Activity	Activity Evaluation/Comments

PROBLEM - Assuming a labor force of 100.7 million by 1980, employment growth will have varied widely in industry.

Job	Percent Change	in 1970 No. of Jobs	Change in No. of jobs	Total by 1980
a. Services	+38	11.6 mill	a.	
b. Contract Construct.	+37	3.3 mill	b.	
c. Government	+33	12.6 mill	c.	
d. Trade	+17	14.9 mill	d.	
e. Finance, insur., real estate	+16	3.7 mill	e.	
f. Manufact.	+13	19.4 mill	f.	
g. Transp. & public util.	+ 6	4.5 mill	g.	
h. Mining	-12	620,000 jobs	h.	
i. Agriculture	-14	3.4 mill	i.	

DISCUSSION -

1. Discuss some factors in the increase or decrease of given job areas.
2. Discuss some jobs within each category. Which ones seem to have a bright future?
3. Knowing the projected increase or decrease, discuss how this could affect your choice of occupations.

RESOURCE MATERIALS -

a. American Society for Personnel administration, 52 E. Bridge St., Berea, Ohio 44017 (Careers in Personnel and Industrial Relations)

b. Public Personnel Association, 1313 E. 60th St., Chicago, Ill. 60637 (Your Career in Public Personnel Administration)

UNIT: Integers

CONCEPT: Integers are relevant to the business world.

Career Education Activity	Activity Evaluation/Comments
DISCUSSION - Many businesses require a knowledge of integers. a. Each gain or loss in a football game can be thought of as a positive or negative number. b. How do the following jobs make use of positive and negative numbers? a. Banking and finance b. Navigation - air and marine c. Elevator operator d. Weather c. Think of other jobs which make use of positive and negative numbers. RESOURCE MATERIALS - Free publications: a. American Bankers Assoc., 90 Park Ave., New York, N. Y. 10016 (Bankers - A Career For Today and Tommorrow) b. Investment Bankers Assoc. of America 425 13th St., N. W. Washington D. C. 20004 (Facts About Investment Banking) c. National Association of Bank-Women, Inc., Public Relations Office, 60E. 42nd St., New York, N. Y. 10017 (A Career for Women in Banking) d. National Association of Accountants, 505 Park Ave., New York, N. Y. 10022 (Management Accounting Opportunities Unlimited) e. Accounting Careers Council, National Distribution Center P. O. Box 650, Radio City Station, New York, N. Y. 10019 (What it's like to be an Accountant) f. American Meteorological Society, 45 Beacon St., Boston, Mass. 02108 (The Challenge of Meteorology)	

UNIT: Graphing

CONCEPT: Graphing is an important tool in the visual expression of ideas in the World of Work!

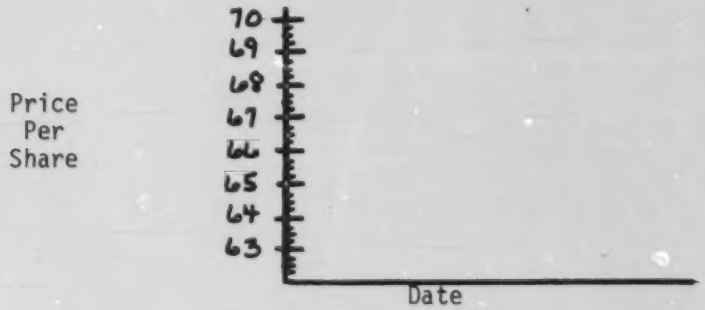
Career Education Activity	Activity Evaluation/Comments
STUDENT PROJECT - A wealth of information concerning careers can be found through your library, guidance office, Career Studies Center, etc. Have students research data for graphing in the following areas: A. Jobs available B. Job requirements C. Pollution statistics (as caused by certain industries) D. Earning power according to age E. Earning power according to education F. Earning power according to sex G. Cost of living H. Student preferences of jobs (class or grade) I. Jobs of students' parents J. No. of times parents changed jobs The type of graphs used could be circle (pie), bar, line.	

UNIT: Graphing

CONCEPT: Graphing is an important tool in the finance area.

Career Education Activity	Activity Evaluation/Comments

STUDENT PROJECT - An interesting activity in graphing is to graph the performance of a stock on the New York Stock Exchange. For example, General Motors stock sells for 66 3/8, which means its selling price is 66 3/8 dollars per share. Changes in stock are reflected in points and fractions of points. One point equals 1 dollar; ½ point is 50¢; ¼ point is 25¢; 1/8 point is 12½¢. The following example illustrates how a graph on General Motors stock may be set up.



Have students follow a stock or several stocks over a given peiod of time. A graph similar to the one above could be made. The price scale will differ according to different stocks. To illustrate growth or loss more vividly the price scale can be subdivided into eighths.

UNIT: Plane Geometry

CONCEPT: Geometry is a useful tool in the work of a machinist.

Career Education Activity	Activity Evaluation/Comments

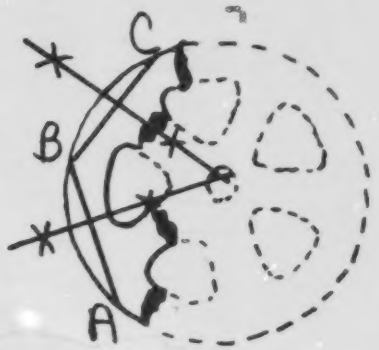
PROBLEM - A machinist must often repair broken flywheels. To do this he must find the radius of the wheel, even though there is only a part of it. This may be done in the following way. Have the class follow the steps necessary to find the radius of the flywheel below. (Teacher may use a cut out paper plate.)

Step 1: Make three points A,B,C.

Step 2: Draw the perpendicular bisector of line segment AB and the perpendicular bisector of line segment BC. The two perpendicular bisectors meet at point O, which is the center of the broken wheel.

STUDENT PROJECT - Students may bring in wheels (broken ones if they have them) and follow the given steps.

DISCUSSION - Discuss what types of machines might have flywheels.



UNIT: Plane Geometry

CONCEPT: Geometry is a useful tool in various careers.

Career Education Activity	Activity Evaluation/Comments
RESEARCH 1. Have students research the uses of angular measurement in plotting points on the earth's surface. How is this related to the world of work? Make a bulletin board on student findings. 2. Divide the class into committees to research uses of plane geometry in areas, such as - A. Navigation B. Architecture C. Fashion design D. Interior decorating E. Building F. Engineering G. Surveying H. Civil engineering Bulletin boards or displays could be used to illustrate findings. Discuss other jobs that use plane geometry. 3. Ask students to choose a building and list the ways that geometry was necessary in its construction. RESOUCE MATERIALS 1. Free publications a. National Society of Interior Designers, 315 E. 62nd St. New York, N.Y. 10021 (Student Career Guide) b. National Society of Professional Engineers, 2029 K. St., N.W., Wash. D.C. 20006 (Engineering, A Career of Opportunity) c. American Society of Civil Engineers, 345 E. 47th St., New York, N.Y. 10017 (Is Civil Engineering for You?) (Your Future in Civil Engineering) d. American Congress on Surveying and Mapping, 430 Woodward Bldg., 15th St., N.W. Wash. D.C. 20005 (Careers in Surveying and Mapping)	

UNIT: Solid Geometry

CONCEPT: Geometry is a useful tool in various careers.

Career Education Activity	Activity Evaluation/Comments
STUDENT PROJECTS 1. Divide the class into committees to research uses of solid geometry in areas, such as A. Engineering B. Architecture C. Packaging D. Design E. Construction industry F. Drafting G. Machining H. Estimating I. Petroleum refining and storing J. Manufacturing Bulletin boards and displays or written reports could show findings. 2. Have students think of other areas involving solid geometry. RESOURCE MATERIALS 1. Free publications a. Society of Petroleum Engineers, 6200 North Central Expressway, Dallas, Texas 75206 (Careers in Petroleum Engineering) b. American Petroleum Institute, 1271 Ave. of the Americas, New York, N. Y. 10020 (Going Places in Oil) c. Those listed under plane geometry. 2. Chronicle Guidance Publications a. Petroleum engineers b. Gas production and distribution occupations c. Machinist d. Set up man (machine shop) e. Those listed under plane geometry f. Careers in industrial design	

UNIT: Measurement

CONCEPT: Measurement is an essential tool in calculating construction costs.

Career Education Activity	Activity Evaluation/Comments
STUDENT PROJECTS - 1. Make a sketch of the school grounds. Draw in the walks, grass areas. You are to find the area of the playground assuming that the entire play area is to be resurfaced with concrete; with asphalt. a. The thickness of the concrete or asphalt is to be 4 inches. 1. How many cubic yards of concrete or asphalt will be needed to cover the play area? 2. Find the price for concrete and asphalt in your local area and compute the cost of materials for resurfacing the playground. 3. Which is cheaper to buy? How much cheaper? Why? Which is the longest lasting material? Why? Which would you use on your driveway at home? Why? 4. What is reinforcing steel? Should you use it? Why? 2. Why doesn't the concrete or asphalt get hard in the delivery truck before you use it? 3. How much concrete or asphalt does a truck haul at one time? 4. Why are spaces left between sections of concrete in a sidewalk or highway? How much space should be allowed between sections?	

UNIT: Measurement

CONCEPT: Measurement is an essential tool in skilled trades.

Career Education Activity	Activity Evaluation/Comments
STUDENT PROJECTS 1. Have students bring in items they have constructed in industrial arts or that someone in their families has made and discuss how measurement was used in the construction. 2. Have students obtain pieces of lumber of various names, such as 2 x 4 and 2 x 6, and measure them to see what the actual sizes are. 3. Have students make bulletin boards, displays, or reports on tools needed for specific crafts. RESOURCE PERSON - Invite a carpenter, industrial arts teacher, or parent in to explain different tools and measurement. DISCUSSION - How would the measurements used by a plumber differ from those used by a carpenter? RESOURCE MATERIAL - If your school has Chronicle Guidance Publications, you may wish to refer to - a. Pipefitter and steamfitter b. Plumber (construction) c. Carpenter (construction)	

UNIT: Measurement

CONCEPT: Measurement is an essential tool in space travel - light years.

Career Education Activity	Activity Evaluation/Comments
PROBLEMS 1. Measurement is very important in the sciences. Some sciences use extremely large and small measurements. For example, a common unit of measurement in aerospace is the light-year; a light-year is the distance traveled by light in 1 year's time. Compute the number of miles to the farthest star in our galaxy, which is 75,000 light-years. 75,000 x 186,000 (speed of light) x number of seconds in a year 2. For a challenge, find the number of yards, feet, or inches in a light-year. RESEARCH - Have students report on the many careers in the science field. Included could be the schooling required, working conditions, etc. RESOURCE MATERIALS Chronicle Guidance Publications a. NASA counsels the earthbound b. Aeronautical engineer	

UNIT: Measurement

CONCEPT: Measurement is an important tool in the areas of architecture and drafting.

Career Education Activity	Activity Evaluation/Comments

STUDENT ACTIVITIES

1. Make a rough drawing of your desk; make a scale drawing of the desk. What skills are necessary in scale drawings that may not be used in rough drawing? Use top of desk, sides, legs, etc. For example:

Top View

Front View

End View

2. Have students make a floor plan of a room in their home, showing dimensions.

RESOURCE MATERIAL

1. Free publications.
   a. American Institute of Architects, 1735 New York Ave., N.W. Wash. D.C. 20006 (A Career in Architecture)
   b. General Motors Corp., Detroit, Mich. (Can I Be A Draftsman?)

2. Chronicle Guidance Publications
   a. Architect
   b. Architectural draftsman
   c. Draftsman
   d. Mechanical draftsman

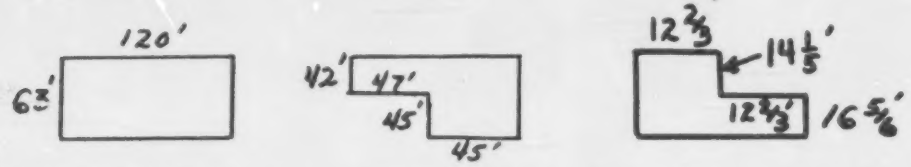
UNIT: Perimeter

CONCEPT: Finding the perimeter is an important skill in business - cost estimating.

Career Education Activity	Activity Evaluation/Comments

PROBLEMS -

1. In many small businesses it is important to give accurate cost estimates for a given job. For example, it is your job to estimate the cost of fencing for each of the following lots-



If chain-link fence costs $1.98 per linear foot, how much would it cost to fence each of the above lots?

2. A picture framer wishes to frame a water-color measuring 22" x 16". A mat (border between picture and frame) is required that measures 3" on the top and 2" sides and 3½" on the bottom. If the molding used for the frame costs $3.85 per linear foot, what is the cost of the frame? (Molding is measured in terms of inside dimensions).

3. Assume that you want to install, or replace, fencing around the entire school play area. Measure the perimeter of this area and compute the cost of the job using $1.75 per linear foot as the unit price.

STUDENT PROJECT - Have students list other jobs in which perimeter is used.

UNIT: Area

CONCEPT: Finding the area is an important tool in the field of carpentry.

Career Education Activity	Activity Evaluation/Comments

How do you suppose a builder makes his first estimate of the cost of a new house? Does he plan a house to sell for a certain price?

1. Draw a simple sketch of the floor of your house. If your house is a two-story house, draw only the downstairs floor plan. Find the area for each room. What is the total area for the first floor of your house?

2. Find advertisements in your newspaper or magazines that give both the price of the house and the amount of square feet of the house. Find the average cost of a house per square feet.

3. What is the estimated cost of your house based on the figure above per square foot?

4. Draw your own plans for a house that would cost about $20,000. Every room does not need to be the same size. Remember to include doorways, stairs, halls, etc. in your drawing.

5. Use cardboard to make a scale model of your house.

6. What luxuries do you have in your home? See if you can find the cost of these luxuries (Air conditioning, fireplaces).

MATERIALS NEEDED -

Graph paper
Newspaper
Ruler
Tagboard or Cardboard
Scissors
Masking tape or Glue

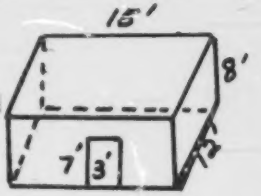
UNIT: Area

CONCEPT: Finding area is an important tool in the field of consumer finance.

Career Education Activity	Activity Evaluation/Comments

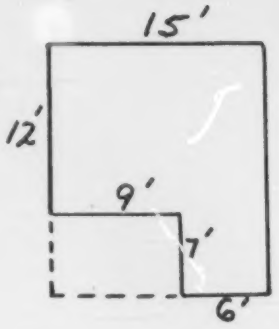
PROBLEMS -

1. You wish to paint the walls of a room in your house. One gallon of the paint you have selected covers 150 square feet. How many gallons of paint are required to paint the room (Do not paint door.)?



2. You wish to have your driveway paved. It's dimensions are 15' x 40'. If blacktop cost $2.25 per square foot, how much would it cost to pave your driveway?

3. You wish to carpet a room and hallway. The carpet you have chosen costs $8.95 per square yard installed. You must purchase a standard width of carpeting. How much does it cost? What is the cost of the wasted portion?



STUDENT PROJECTS -

1. Have students list other products which are priced in square units.

2. What occupations deal with computing area?

RESOURCE MATERIALS -

1. Free publications
   a. Brotherhood of Painters, Decorators, and Paperhangers of America, 1925 K St., N.W. , Wash. D.C. 20006 (Painters, Decorators, and Paperhangers)

   b. Structural Clay Products Institute Mason Relations Dept. 1750 Old Meadow Road, McLean, Va. 22101 (Bricklaying as a Vocation)

2. Chronicle Guidance Publications

UNIT: Area

CONCEPT: Finding area is an important tool in the field of consumer finance-painting.

Career Education Activity	Activity Evaluation/Comments
PROBLEMS - 1. Find the area of the walls and ceilings of your classroom. What is the area of the classroom that will not be painted? What is the area that will be painted? 2. Collect labels from several different brands of paint. How much surface can be covered by a gallon of each type of paint? How many gallons of each brand of paint will be needed to paint the entire room? 3. What is the cost of a gallon of paint? How much will it cost to paint the room with each brand of paint? If you wanted to paint each wall and the ceiling a different color, how much would it cost? INTERVIEW - 1. Find out how much a painter is paid for each hour's work. How long will it take a painter to paint the room? How much will the painter charge to paint the room? 2. Ask a painter which is quicker to work with - a brush or a roller? Which causes the most mess? Why? Using the average figures above, how much will it cost to paint the entire school? Your home ?	

UNIT: Area

CONCEPT: Finding area is an important tool in the field of consumer finance - real estate learning center.

Career Education Activity	Activity Evaluation/Comments

How much is your house worth? How does an appraiser decide the value of a house? What is the price of an apartment or townehouse building?

PROCEDURE

1. In the Want Ad section of your newspaper, locate the "Houses for Sale" section. Select several houses that are located in different sections of your town. Pick houses that are similar in number of rooms and lot size. Make a chart similar to the following:

House	Section of town	Total Area of floor space	Number of rooms	Lot size	Extra's	Estimated or Actual Cost

2. Find answers for the following problems:
   a. What is the price per room for each house?
   b. What is the price per square foot of each house?
   c. Are the lots different in size? Does the size of the lot seem to affect the price? How?
   d. Does the section of town where the house is located affect the price? How?
   e. Does the most expensive house have extra or luxury features that the others do not have? What do you estimate the value of these luxuries to be? Do you think they are worth the extra cost?

UNIT: Area

CONCEPT: Finding area is an important tool in the field of consumer finance - real estate learning center.

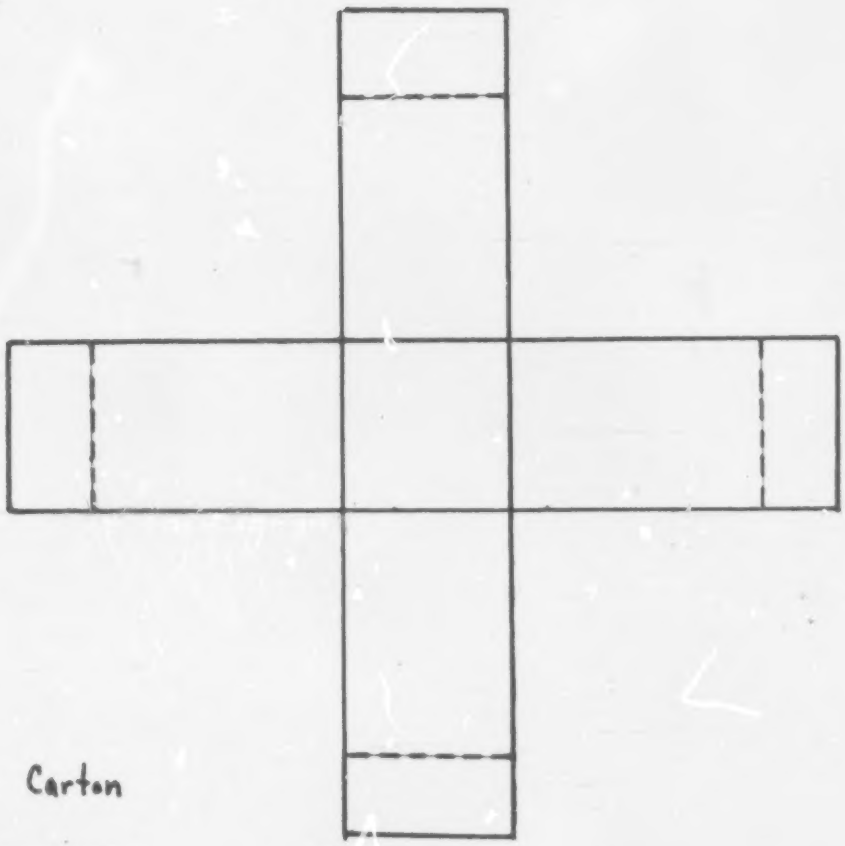
Career Education Activity	Activity Evaluation/Comments
2. cont'd f. Is the smallest house the cheapest? STUDENT PROJECTS - 1. Estimate the value of your house. Ask your parents to estimate the value of your house. How do your figures compare? Discuss your difference of opinion. 2. Write an advertisement in which you want to sell your house. INTERVIEW - Talk with a realtor about his business. MATERIALS NEEDED - Newspaper ads (real estate section)	

UNIT: Area

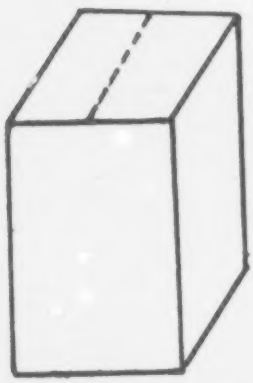
CONCEPT: Finding area is important in manufacturing - packing.

Career Education Activity	Activity Evaluation/Comments
1. Cardboard cartons are used in packing many things. The manufacturer must know how much cardboard is needed to make the carton. The diagram on the activity sheet shows the layout of a carton. Find the area of each panel and complete the table. 2. Have students bring in cartons, measure them, and complete the chart on page . 3. Discuss why cartons may not be filled completely.	

Layout Pattern



Closed Carton



Scale: 1" = 4'

Top Panels			Side Panels			Bottom Panels			CARTON TOTAL AREA	
Size	Number	Total Area	Size	Number	Total Area	Size	Number	Total Area	Square Inches	Square Feet

UNIT: Volume

CONCEPT: Computing volume is an important tool in relating the impact of refuse to the environment.

Career Education Activity	Activity Evaluation/Comments
STUDENT PROJECTS 1. Find the number of garbage cans for each family on your block. Also find and list the number of persons in each family. What is the average number of garbage cans each person fills in a collection period? A month? A year? 2. How tall is the garbage can (average can)? What is its diameter? Cubic feet capacity? How many cubic feet of garbage does your family set out each collection period? Each month? Each year? How much are you responsible for if you and your family members each contribute an equal share to the garbage? 3. How many people live in your town? How much total garbage do you think your city contributes to the garbage dump each day? Month? Year? 4. How much does your city garbage truck hold before it needs to be emptied? How many times a day is it emptied? How much garbage do the city collectors collect each day? Month? Year? 5. How much longer do you think it will be before your city or county garbage dumping area will be filled to capacity? What will happen to your garbage then?	

UNIT: Volume

CONCEPT: Computing volume is an important tool in personal finance.

Career Education Activity	Activity Evaluation/Comments

PROBLEMS

1. You wish to build a concrete patio 20' x 14' x ½'. Concrete is measured in cubic yards and fourths of cubic yards. (i.e. - 2¼ cu. yds.) How many cubic yards of concrete are required to build the patio?

2. A contractor said he would complete the job for $200. If concrete costs $20 a cubic yard, how much would you save by doing it yourself?

STUDENT PROJECT - Have students list careers in which volume is used.

RESOURCE MATERIALS

1. Chronicle Guidance Publications
   a. Cement masons
   b. House building
   c. Air-conditioning and refrigeration mechanic
   d. Geologist
   e. Tool and die maker
   f. Oceanographer
   g. Purchasing agent

2. Free publications
   a. National Machine Tool Builders Assoc., 2139 Wisconsin Ave., N. W., Wash. D.C. 20007 (Machine Tools-America's Muscle)
   b. International Oceanographic Foundation, Rickenbacker Causeway, Virginia Key, Miami, Florida 33149 (Training & Careers in Marine Science)
   c. Society of Petroleum Engineers, 6200 North Central Expressway, Dallas, Texas 75206 (Careers in Petroleum Engineering)
   d. National Association of Purchasing Management, 11 Park Place, New York, N.Y. 10007 (Purchasing as a Career)

UNIT: Metric System

CONCEPT: The metric system is an essential tool in many careers.

Career Education Activity	Activity Evaluation/Comments
STUDENT PROJECTS 1. Compose a paragraph using the English system of linear measurement. Rewrite the paragraph, using the metric system. Topics could include sporting events, maps, photography, etc. 2. List occupational areas in which the metric system is currently used. Bring in advertisements or articles concerning the metric system. 3. Have students bring in metric tools and convert their measurements to the equivalent measurements in the English system. 4. Prepare a bulletin board showing specific buildings, mechanical devices, etc.and their known English measurements. Also show the measurements in metric units. DISCUSSION - How do various careers have to change if this country converts to the metric system? RESEARCH - Have a student interview a pharmacist concerning his use of the metric system. Note: See related word puzzle and activity sheets in the appendix.	

UNIT: Story Problems

CONCEPT: Story problems are an important part of all careers.

Career Education Activity	Activity Evaluation/Comments
STUDENT PROJECT - Encourage students to explore a job of their choice and make up written problems concerning it. In doing this, emphasize the importance of key words. Special attention should be devoted to situations containing too little or too much information. Students can communicate their problems to the class by means of chalkboard, displays, transparencies.	

UNIT: Probability

CONCEPT: Computing probability is an important tool in the career of meteorology.

Career Education Activity	Activity Evaluation/Comments

PROBLEM - Probability can create a great deal of interest on the part of students if presented by a laboratory approach. Experiments with dice, coins, spinners, cards, and other devices of chance can provide situations in recording data, and provide experience in predicting outcomes.
For example,

During the month of July, a weather station reported the number of days each condition listed in the table below existed.

Condition	No. of Days
Fair	18
Partly Cloudy	8
Rain	5

What is the probability that it will rain on a given day? That it will be fair on a given day?

BULLETIN BOARD - Have students prepare a bulletin board on careers in which the ability to predict is important.

RESOURCE MATERIAL

1. Free publications
   a. American Meteorological Society, 45 Beacon St., Boston, Mass. 02108 (The Challenge of Meteorology)
   b. American Society of AGricultural Engineers, Saint Joseph, Mich. 49085 (Agricultural Engineering and You)
   c. American Institute of Cooperation, 1200 17th St., N. W., Wash. D.C. 20036 (Careers in Agriculture)
   d. American Society of Agronomy, 677 S. Segae Road, Madison, Wisc. 53711 (Careers in Agronomy, Crop Science, and Soil Science)
   e. U.S. Dept. of Agriculture, Office of Management Services, Division of Personnel, Wash. D. C. 20402 (A Career for You in Agricultural Statistics)
   f. American Statistical Association , 810 18th St., N. W. Wash. D.C. (Careers in Statistics)

UNIT: Algebra

CONCEPT: Mathematics is an important tool in professional careers.

Career Education Activity	Activity Evaluation/Comments

STUDENT PROJECTS

1. From each of the following groups of occupations have the students select the one in which they are most interested:

Group I	Group II	Group III
Physician	Political Scientist	Architect
Dentist	Accountant	Building Contractor
Veterinarian	Statistician	Electrician
Registered nurse	Job Analyst	Civil Engineer
Dental technician		Electrical Engineer
Pharamacist		

Group IV	Group V	Group VI
Aircraft Pilot	Atomic Scientis	Draftsman
Ship Captain/Mate	Botanist	Tool and Die Maker
Navigator	Chemist	Cartographer
Air Flight Dispatcher	Oceanographer	Surveyor
Aeronautical Engineer	Geologist	

2. Have the students research the education and job requirements for the six occupations they have chosen. Have them write a report on each one explaining why a knowledge of algebra or higher mathematics would be essential.

RESOURCE MATERIALS

1. Free publications
   a. American Association of Anatomists, Dept. of Anatomy, University of Michigan, East Medical Building, Ann Arbor, Mich. 48104 (Careers in Anatomy)
   b. American Medical Association, 535 N. Dearborn St., Chicago, Ill. 60601 (Horizons Unlimited)
   c. American Dental Association, Council on Dental Education, 211 E. Chicago Ave., Chicago, Ill. 60611 (Careers in Dentistry)

UNIT: Algebra

CONCEPT: Mathematics an important tool in professional careers involving Physics.

Career Education Activity	Activity Evaluation/Comments

PROBLEM - Physics is the science which includes the study of mechanics, electricity, heat light, and sound. It is essential to any kind of engineering career as well as to many other careers. Algebra is essential to the study of Physics.

The following formulas were taken from a high school Physics text:

Formulas in Mechanics

$d=vt$ $\quad f=ma$ $\quad K.E=\frac{1}{2}mv^2$

$d=\frac{1}{2}at^2$ $\quad a=\frac{v^2}{r}$ $\quad t=\frac{1}{g}$

$w=fd$

$v=2gd$

Formulas in Electricity

$P=IE$ $\quad R=\frac{m}{X\ n}$ $\quad I=\frac{E}{R+r}$ $\quad C=\frac{ME}{R+nr}$

$I=\frac{E}{R}$ $\quad W=IEt$ $\quad H=0.24I^2RT$ $\quad C=\frac{E}{\frac{R+r}{n}}$

Have the students obtain a Physics book and give the meaning of the preceding formulas that relate to the types of equations they have studied, and have them solve the example problems.

Using these formulas research the career fields associated with types of formulas and physics in general.

RESOURCE MATERIALS

1. Free publications
   a. American Institute of Physics, 335 E. 45th St., New York, N.Y. 10017 (Physics as a Career)
   b. American Society of Mechanical Engineers, 345 E. 47th St., New York N.Y. 10017 (Definitions of Occupational Specialties in Engineering)

UNIT: Algebra

CONCEPT: Mathematics is an important tool in aviation careers.

Career Education Activity	Activity Evaluation/Comments

PROBLEMS

1. How fast must a pilot fly his aircraft if he is scheduled to cover a distance of 1600 miles in 4 hours, but faces a headwind of 40 miles per hour?

2. What other types of problems could a pilot encounter that would require the ability to set up an equation or a system of equations?

STUDENT PROJECT - The aviation industry is highly diverse and produces all components of the aircraft. For example, the following career fields are essential to the production of jet engines: Drafting, Testing, Tool making, Engineering, Inspection, Performance, Calculations, Pay Roll, Material Control, Production, Pattern Making.

Make a list of other careers in aviation that would require a good knowledge of algebra or higher mathematics.

RESOURCE MATERIALS -

1. Free publications
   a. General Motors Corp., Detroit, Mich. (Can I Be a Draftsman?)
   b. Society of Reproduction Engineers, 305 S. Andrews Ave., Suite 610 Fort Lauderdale, Florida 33301 (Careers in Graphic Reproductions)
   c. Internal Revenue Service, US Treasury Dept., 1111 Constitution Ave., N. W., Wash. D.C. 20224 (Engineer Tax Men)
   d. National Society of Professional Engineers, 2029 K St., N.W., Wash. D.C. 20006 (Engineering, a Career of Opportunity)
   e. National Machine Tool Builders Assoc., 2139 Wisconsin Ave., N. W., Wash. D.C. 20007 (MachineTools-America's Muscles)

2. Chronicle Guidance Publications
   a. Patternmaker
   b. Tool and die maker
   c. Engineers
   d. Draftsman
   e. Mechanical draftsmen
   f. Aircraft and engine mechanic

UNIT: Algebra

CONCEPT: Mathematics is an important tool in all fields of engineering.

Career Education Activity	Activity Evaluation/Comments

COMMITTEE WORK - Divide the class into committees to explore the following types of engineers. Look specifically for education needed, special skills, specific areas of employment, earnings, supply and demand, work conditions, types of products involved.

1. Aeronautical engineer
2. Agricultural engineer
3. Ceramic engineer
4. Chemical engineer
5. Civil engineer
6. Electrical engineer
7. Industrial engineer
8. Mechanical engineer
9. Metallurgical engineer

DISCUSSION - Why would a good knowledge of algebra be essential in the above career fields?

RESOURCE MATERIAL

1. Engineering is a promising career field despite current employment difficulties. The need for engineers is expected to increase rapidly during the 70's, although at a slower rate than during the 60's. Demand is expected to be strongest for engineers educated in computer applications and for those who can apply engineering principles to medicine, biology and sciences . The government's "Occupational Outlook Handbook" (6.25) and its supplement, the "Occupational Outlook Quarterly"($3 for a two year subscription) may be purchased by writing: Bureau of Labor Statistics
   406 Penn Square Building
   1317 Filbert Street
   Philadelphia, Pa. 19107

2. Free publications
   a. American Society of Agricultural Engineers, Saint Joseph, Mich. 49085 (Agricultural Engineering and You)

UNIT: Algebra

CONCEPT: Mathematics is an important tool in surveying.

Career Education Activity	Activity Evaluation/Comments
PROBLEM - A surveyor wishes to layout building lots specified to have a length 10 feet greater than 3 times the width. If each lot is to be 150 ft. long, what will be the width? RESEARCH - 1. Have students further investigate how equations in 1 variable could apply to other surveying problems. 2. Have students investigate other careers where this type of equation would be used. RESEARCH MATERIAL Chronicle Guidance Publications a. Land surveyor of the future b. Status of the Surveying profession in the USA. c. Cartographer	

UNIT: Algebra

CONCEPT: Mathematics is an important tool in the World of Work.

Career Education Activity	Activity Evaluation/Comments
RESOURCE MATERIAL - 1. Throughout the Algebra text there are word problems that relate to career fields. The students should be constantly aware of the possible applications of these problems to the World of Work. Many such problems can be related to more than on career. The following attachment is a list of people who would require a knowledge of algebra or higher mathematics in their jobs. After solving each word problem have the student list all people from this list who would possibly use this type of problem in their work. 2. Free publications a. American Astronimical Society, Executive Office, 211 Fitz Randolph Road, Princeton, N. J. 08540 (A Career in Astronomy) b. Mycological Society of America, Care of New York Botanical Garden, Bronx, N.Y. 10458 (A Career in Cycology) c. American Society for Microbiology, 1913 Eye St., N.W., Wash. D.C. 20006 3. Chronicle Guidance Publications a. Anthropologist b. Astronomer c. Men behind the men in the moon d. Microbiologist e. Compositor f. Forester g. Forestry aide h. Medical technologist i. Millwright j. Geologist k. Statistician	

UNIT: Algebra

CONCEPT: Mathematics is an important tool in the World of Work.

Career Education Activity	Activity Evaluation/Comments

PROBLEM - The following example can be solved by an equation in one variable or by a system in 2 variables. Have the students use a system in two variables. A feed-grain store owner wishes to mix a grain worth 90¢ per bushel to a grain worth $1.20 per bushel to produce a mixture of 30 bushels worth $1.00 per bushel. How many bushels of each should he use?

STUDENT PROJECTS -

1. Mixture problems are often solved with a system of equations. Have the students list other career fields where mixture problems would probably be used, i.e. Chemistry, Pharmacy.

2. Have the students find or write other word problems (not mixture) that can be solved with a system of equations and that relate to the World of Work.

RESOURCE MATERIAL -

1. Free publications
   a. American Chemical Society, 1155 16th St., N.W. Wash., D.C. 20036 (Career Opportunities) (Chemistry and Your Career)
   b. Manufacturing Chemists' Assoc., 1825 Conn. Ave., N.W. Wash. D.C. 20009 (Careers Ahead in the Chemical Industry)
   c. American Pharmaceutical Assoc., 2215 Constitution Ave., N.W. Wash. D.C. 20037 (See Your Future in Pharmacy)

2. Chronicle Guidance Publications
   a. Chemist
   b. Industrial chemical industry occupations
   c. Pharmacist

General Activities

1. A Day Without Numbers
   Have students write a paragraph describing a day without numbers. (Exclude time, page numbers, room numbers, telephone numbers, bus numbers, money.)

2. A Day In The Business World
   Have students develop a bulletin board on a typical business including a blueprint of the building, time clocks, tax records, Social Security, hourly wages, products (quotas) and maps to the building. Try to include every possible use of mathematics.

3. Make a diorama of your favorite career. Be sure to include the surroundings, other workers, tools.

4. During American Education Week, invite parents to speak to your class about their career. Suggest they bring tools and material to give a clearer impression of their activities on the job.

5. Have students set up a business, decide upon the item or service to be sold, and describe in detail its actual function. Have students identify specific problems that will require mathematics -maps to the plant, payroll, income tax, expenses, inventory.

Self-Motivational Lab

6. Set aside a portion of the resource center of your school to be used as a self-motivational lab. The purpose of this will be to motivate students to explore careers of their choice. The contents of the lab may be as follows:

   1. Books describing various careers
   2. Career projects done by individual students
   3. Displays of tools and materials used in various careers
   4. Descriptive literature on careers that has been written by students such as "A Day In The Life of a ... "
   5. Taped interviews of workers in various careers-parents, community business people
   6. Career counseling materials from the guidance department
   7. A sign-up sheet for conferences with the counselor, stating "Do you think I would be successful as a ....."

Job Interview

Choose a job you are interested in and interview someone in that job.

I. Ask the following questions
   1. What is the name of your job? _____
   2. Do you like your job? _____yes _____no.
      a. What things do you like about your job?

      _____

      _____

      _____

      b. What things do you dislike about your job?

      _____

      _____

      _____

   3. How long have you worked on this job? _____
   4. Did you work on another job before? _____yes _____no
   5. If yes, why did you change? _____

      _____

   6. Do you recommend this job to a high school student looking for a career? _____yes _____no.
      Why? _____

      _____

   7. If you were in Junior High School today, what would you do differently than when you were in school? _____

      _____

   8. What school subjects were important to your job?

      _____, _____, _____, and _____.

II. Answer these questions yourself.
   1. Do you still want to be in this type of job? ___yes___no
   2. Has your idea of this job changed? _____yes _____no
      If yes how ? _____

      _____
   3. What steps should you take to prepare yourself for this job?

      _____

      _____ _____

The following is a sample balance sheet for a business. Students may complete it as an additional activity in the study of whole numbers.

Business:

I. Income
   1.
   2.
   3.
   4.
   5.
   6.
   Total Income

II. Expenses
   1. Salary & wages
   2. Rent
   3. Taxes
   4. Insurance
   5. Utilities
   6. Advertising
   7. Depreciation of Equipment
   8. Supplies
   9. Interest
   10. Miscellaneous Expenses
   Total Expenses

III. Net Profit

METRIC UNITS

L	O	A	N	A	C	O	N	Y	L	L	M	K	I	L	I	R
E	K	T	E	R	I	L	O	M	E	T	A	I	P	R	I	E
M	I	N	O	U	S	T	P	D	E	C	I	L	I	T	E	R
R	L	A	E	O	U	G	E	H	E	C	T	O	G	R	A	M
T	O	L	R	M	F	S	H	E	R	A	T	G	D	O	P	I
T	M	M	E	T	E	R	A	E	O	P	Q	R	E	M	O	L
B	E	V	A	S	A	P	D	E	F	G	I	A	C	C	A	L
C	T	A	B	O	G	E	N	O	N	S	E	M	A	P	E	I
C	E	N	T	I	M	E	T	E	R	J	O	E	M	I	C	G
B	R	E	N	D	A	I	A	M	T	O	W	A	E	T	E	R
D	E	C	A	M	E	T	D	E	C	I	M	E	T	E	R	A
E	K	I	L	O	M	I	L	L	I	M	E	T	E	R	O	M
M	C	E	N	T	I	L	I	T	E	R	G	O	R	D	A	Y
M	I	L	H	M	E	T	R	I	C	G	R	A	M	A	R	Y
K	I	L	O	L	I	T	E	R	C	A	R	E	E	R	S	S
C	E	N	J	O	E	L	I	T	E	R	J	O	N	D	O	N
W	H	E	C	T	M	I	L	L	I	L	I	T	E	R	T	O

millimeter

centimeter

meter

gram

kilometer

metric

kilogram

decimeter

decameter

milligram

hectogram

liter

kiloliter

milliliter

centiliter

deciliter

TOOLS

E	B	W	M	H	A	S	R	A	M	C	N	O	B	H	K	R
L	O	R	O	M	D	T	N	E	D	S	R	E	G	J	E	E
D	E	A	P	F	A	S	C	B	T	E	S	D	C	T	I	D
E	G	V	N	E	C	N	T	K	T	L	I	A	E	L	R	N
E	H	X	E	A	A	M	J	S	F	H	E	M	P	E	M	I
N	N	S	C	L	K	K	I	G	R	I	C	J	T	M	R	L
C	K	C	A	B	P	G	M	E	L	I	F	Q	S	P	O	Y
I	F	B	E	D	E	A	T	I	R	H	E	Q	R	A	V	C
M	F	G	E	R	Q	E	D	T	C	L	E	O	C	O	T	D
R	E	T	U	P	M	O	C	T	U	R	T	K	L	R	S	E
E	F	S	E	I	D	E	A	R	A	R	O	T	P	E	B	T
D	G	S	T	B	L	W	E	U	A	O	M	M	G	D	R	A
O	H	L	B	E	P	D	Q	C	K	E	Q	U	E	E	U	U
P	A	C	G	O	I	S	T	B	T	X	A	W	L	T	V	D
Y	W	C	T	L	A	O	A	E	R	G	Y	U	S	T	E	A
H	U	S	S	H	R	B	R	V	D	D	R	G	J	C	E	R
H	Y	G	R	O	M	E	T	E	R	D	J	K	A	H	B	G

Graduated cylinder — Compass — Square

Hypodermic needle — Computer — Protractor

Hygrometer — Altimeter — Volt meter

Level — Balance — Stop watch

Electric meter — Ruler — Register

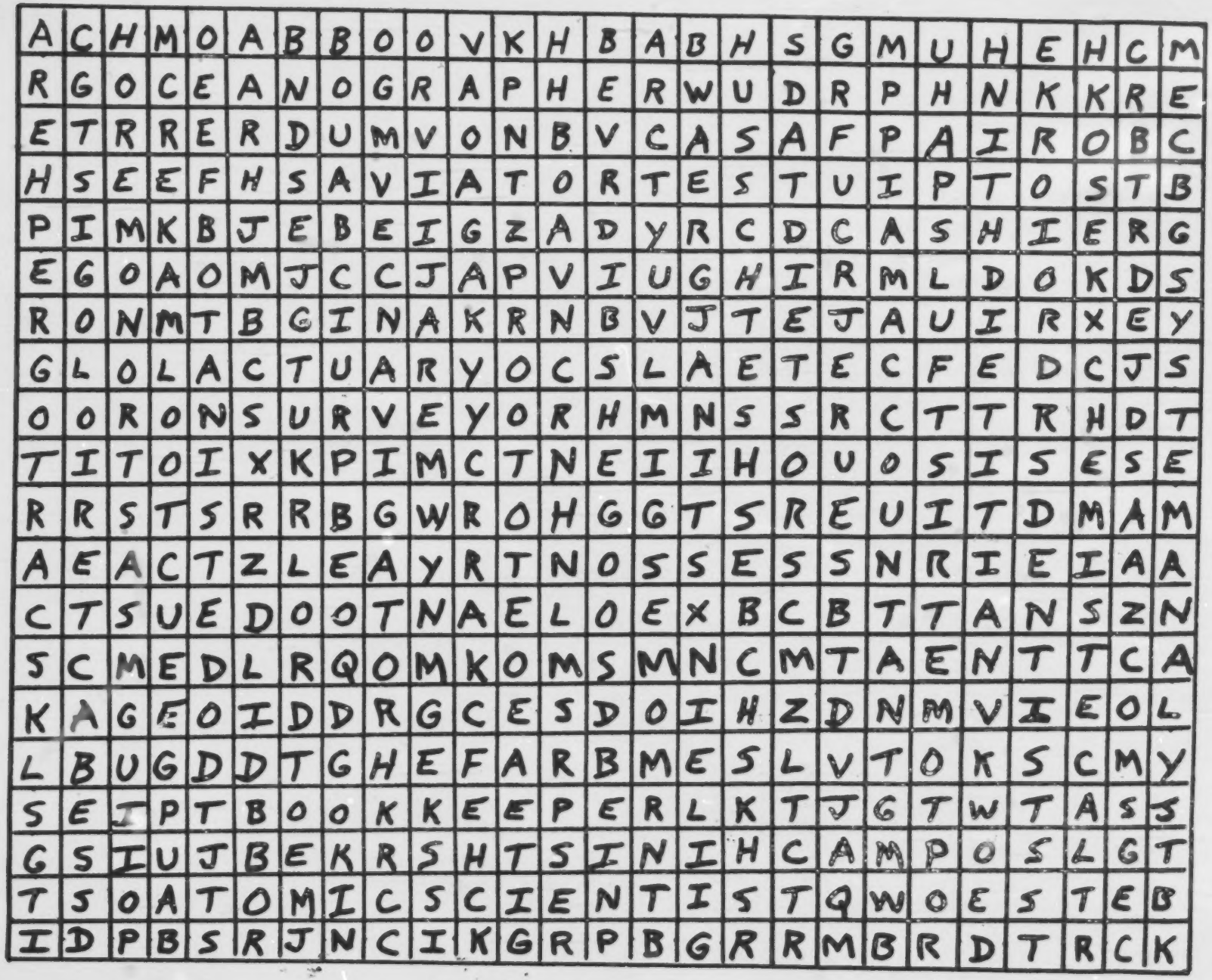
Micrometer — Slide rule — Gauge

TOOLS

S	A	U	R	C	R	O	U	T	W	H	A	T	T	N	T	H
Q	U	D	E	V	I	L	I	S	C	O	M	P	A	S	S	E
U	S	C	R	E	W	D	R	I	V	E	R	G	O	I	N	G
A	O	N	H	E	R	E	O	U	M	H	I	R	S	T	U	L
R	U	L	E	D	C	H	I	S	E	I	S	P	I	E	S	S
E	L	E	L	L	V	S	T	D	R	I	L	L	I	N	S	S
R	T	V	O	U	E	R	A	L	M	S	T	I	V	R	D	Y
U	S	E	Y	M	H	A	M	M	E	R	U	E	O	I	E	A
V	S	L	E	E	B	S	I	S	I	T	P	R	R	S	V	A
N	T	U	V	R	A	T	C	E	O	T	S	S	Y	U	U	M
G	S	V	L	O	X	U	R	A	U	M	R	O	S	T	U	V
S	R	W	C	N	P	R	O	T	R	A	C	T	O	R	I	I
A	Q	X	A	S	U	V	M	E	A	N	I	N	M	N	O	P
W	P	Y	C	T	W	R	E	N	C	H	J	A	E	I	O	U
H	O	Z	A	U	N	M	T	I	E	O	K	A	X	Y	M	Y
I	N	I	M	L	Y	V	E	O	L	P	L	N	O	S	T	U
L	M	E	L	V	S	S	R	U	O	N	M	L	V	N	Y	X

hammer
level
screwdriver
square
micrometer
wrench
rule
drill
pliers
compass
protractor
saw
chisel

CAREERS IN MATHEMATICS



Careers In Mathematics

NAVIGATOR
SURVEYOR
ECONOMIST
ENGINEER
DRAFTSMAN
BANKER
STATISTICIAN
ACCOUNTANT
ASTRONOMER
AUDITOR
BOOKKEEPER
ARCHITECT
MATHEMATICIAN
CASHIER
ATOMIC SCIENTIST
AVIATOR
BACTERIOLOGIST
BOTANIST
CARTOGRAPHER
CHEMIST
DENTIST
ECOLOGIST
DIETITIAN
GEOLOGIST
OCEANOGRAPHER
ACTUARY
BURSAR
SYSTEM ANALYST
OPTOMETRIST
MACHINIST
TOOL MAKER
ASSESSOR

CAREERS IN GENERAL MATHEMATICS

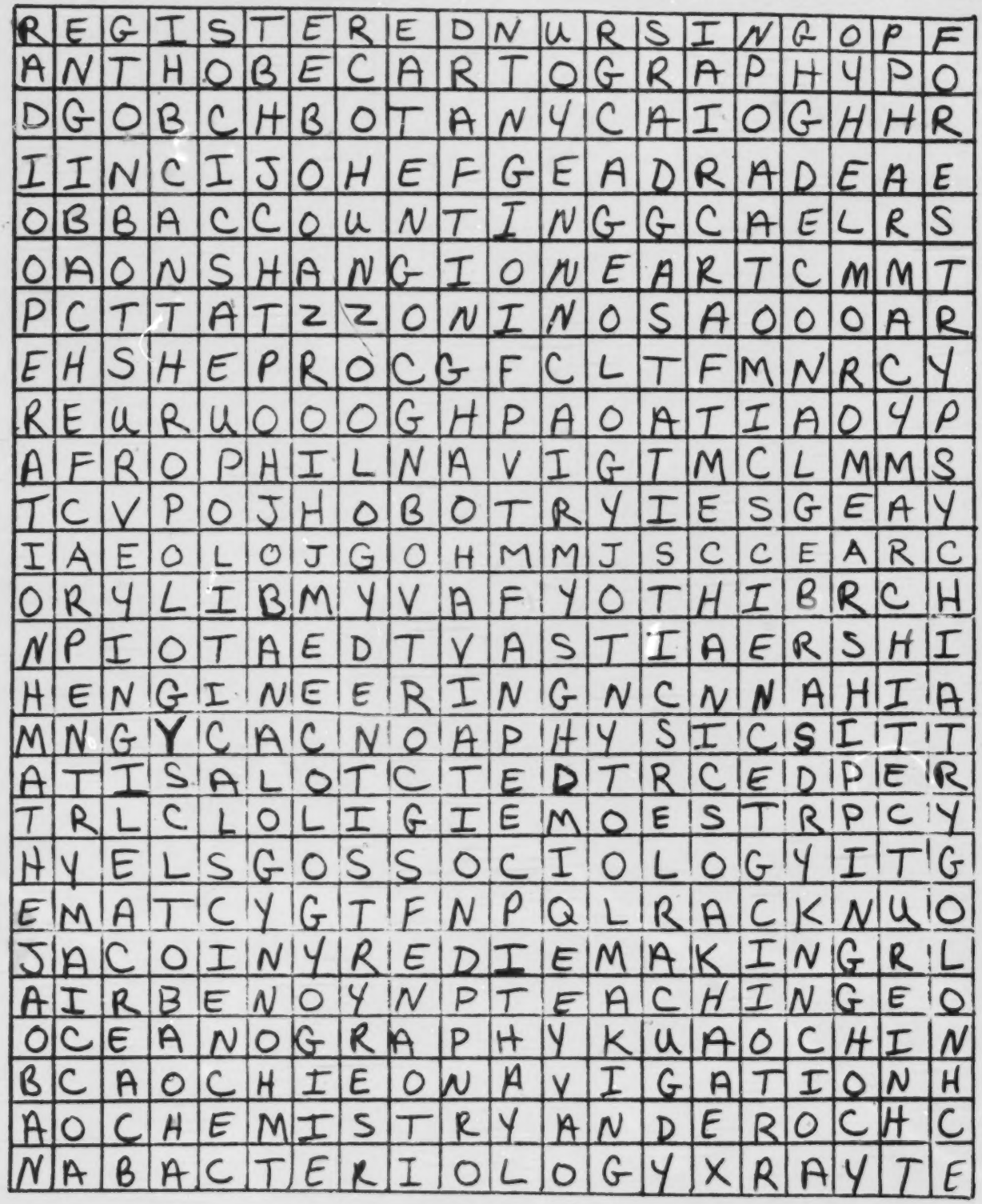
I	N	D	U	S	T	R	I	A	L	D	E	S	I	G	N	M	P	S	I
A	B	C	D	E	F	P	P	O	S	T	O	F	F	I	C	E	L	A	J
K	M	N	N	O	M	O	O	S	P	Q	R	S	T	U	V	C	A	L	W
B	I	L	L	C	O	L	L	E	C	T	I	N	G	H	C	H	S	E	U
O	U	X	Y	Z	L	I	I	L	G	Q	D	E	F	A	A	T	A	S	N
A	H	Y	R	B	D	T	C	L	S	T	V	A	N	C	D	N	E	C	D
T	O	H	I	P	I	I	E	I	C	E	H	B	F	R	S	I	R	L	E
B	F	H	O	N	N	T	C	N	R	A	V	E	L	G	U	C	I	E	R
U	I	D	E	A	G	S	B	G	U	I	D	A	N	C	E	S	N	R	T
I	N	S	U	R	A	N	C	E	P	R	I	N	T	I	N	G	G	K	A
L	A	N	D	S	C	A	P	I	N	G	C	D	E	F	G	H	J	I	K
D	K	M	N	O	L	H	P	H	O	T	O	G	R	A	P	H	Y	N	I
I	N	T	E	R	I	O	R	D	E	C	O	R	A	T	I	O	N	D	N
N	P	E	P	E	Q	M	A	I	R	O	S	T	W	E	L	D	I	N	G
G	H	L	U	A	V	E	D	E	W	N	X	Z	Y	Z	A	N	D	E	R
P	A	E	P	L	A	E	I	S	U	D	L	A	S	C	M	C	H	T	H
L	R	G	S	E	R	C	O	E	H	U	G	C	D	H	F	B	C	A	E
U	M	R	T	S	R	O	T	T	E	C	E	P	A	I	N	T	I	N	G
M	A	A	S	T	Q	N	E	T	A	T	I	J	Q	N	D	O	N	E	L
B	C	P	P	A	S	O	C	I	G	I	F	O	R	G	I	N	G	A	V
I	Y	H	E	T	R	M	H	N	F	N	C	X	S	A	F	B	H	R	I
N	G	Y	A	E	B	Y	N	G	R	G	E	O	L	O	G	Y	S	O	N
G	S	P	O	R	T	S	O	C	I	A	L	W	O	R	K	P	T	S	E
J	E	W	E	L	R	Y	L	A	W	A	T	C	H	M	A	K	I	N	G
A	M	I	S	T	T	O	O	L	A	N	D	D	I	E	R	E	C	O	N
A	S	T	C	L	E	R	G	Y	S	T	E	N	O	G	R	A	P	H	Y

Key

Boatbuilding
Buying
Bill Collecting
Clergy
Conducting
Die Setting
Forging
Geology
Guidance
Home economy
Industrial design
Insurance
Interior Decoration
Jewelry
Landscaping
Law
Mechanics
Molding
Painting
Pharmacy
Photography
Plastering
Plumbing
Police
Politics
Post Office
Printing
Radio Technology
Real Estate
Salesclerking
Selling
Social Work
Sports
Stenography
Teaching
Telegraph
Tool & Die
Undertaking
Watchmaking
Welding

The following puzzle contains 37 career fields that require knowledge of Algebra. Circle as many as you can find.

Look vertically, horizontally, diagonally and around the corners. Some are in two word



Key

Accounting
Agronomy
Anthropology
Architecture
Astronomy
Atomic Science
Aviation
Bacteriology
Botany
Cartography
Chemistry
Carpentry
Dentistry
Drafting
Ecology
Engineering
Forestry
Geology
Job Analogy
Aircraft Mechanics
Navigation
Registered Nursing
Oceanography
Pharmacy
Physics
Political Science
Psychiatry
Radio Operation
Shipping
Sociology
Statistics
Surveying
Teaching
Tool making
Die making
X-Ray Technology
Zoology

The following puzzle contains 34 career fields that require knowledge of geometry. Circle as many as you can find.

Look horizontally, vertically and diagonally. Some are in several words.

P	R	A	D	C	A	G	R	O	N	O	M	Y	F	A	B	I	X	D
A	A	R	C	H	I	T	E	C	T	U	R	E	L	G	A	B	R	E
S	D	S	G	O	E	C	O	L	O	G	Y	S	H	T	O	M	A	N
U	I	Z	O	L	I	N	G	M	O	L	D	I	N	G	T	O	Y	T
R	O	I	N	D	U	S	T	R	I	A	L	D	E	S	I	G	N	A
V	O	L	U	I	O	R	T	S	O	C	I	O	L	O	G	Y	P	L
E	P	S	O	N	P	H	Y	S	I	C	S	O	A	Q	P	R	I	T
Y	E	N	G	I	N	E	E	R	I	N	G	C	V	G	A	R	D	E
I	R	G	E	O	T	E	M	D	R	A	F	T	I	N	G	O	S	C
N	A	S	T	R	O	N	O	M	Y	M	A	D	A	E	L	O	R	H
G	T	C	A	R	T	O	G	R	A	P	H	Y	T	S	N	V	G	N
D	I	E	D	E	S	I	G	N	I	N	G	D	I	H	B	C	A	O
A	O	C	E	A	N	O	G	R	A	P	H	Y	O	B	A	N	E	L
F	N	E	L	E	C	T	R	O	N	I	C	S	N	O	S	T	D	O
D	A	N	T	H	R	O	P	O	L	O	G	Y	B	O	T	A	M	G
O	V	S	H	I	P	P	I	N	G	C	A	R	P	E	N	T	R	Y
A	I	R	F	L	I	G	H	T	D	I	S	P	A	T	C	H	E	Z
M	G	E	O	L	O	G	Y	D	E	N	T	I	S	T	R	Y	O	O
C	A	B	I	N	E	T	M	A	K	I	N	G	B	A	C	M	N	O
I	T	O	O	L	A	N	D	D	I	E	M	A	K	I	N	G	G	L
A	I	R	P	O	R	T	M	A	N	A	G	E	M	E	N	T	H	O
F	O	R	E	S	T	R	Y	S	C	U	L	P	T	U	R	E	I	G
G	N	S	H	E	E	T	M	E	T	A	L	A	O	S	P	H	N	Y

Key

Agronomy
Air flight despatch
Airport management
Anthropology
Architecture
Astronomy
Atomic Science
Aviation
Cabinetmaking
Carpentry
Cartography
Dental technology
Dentistry
Die Designing
Drafting
Ecology
Electronics
Engineering
Forestry
Geology
Industrial design
Molding
Navigation
Oceanography
Physics
Radio Operation
Sculpture
Sheet-metal
Shipping
Sociology
Surveying
Tool & die making
X-Ray
Zoology

J	O	B	S
Minimum education required			
H. S. Drop Out	High School	Technical Training	College
fruit picker	clerk	T.V. repairman	doctor
janitor	bank teller	medical technician	librarian
labor	cook	fireman	lawyer
gas station attendant	carpenter's helper	teacher aide	teacher
bus boy	mason's helper	Computer programmer	military officer
taxi driver	military personnel	police man	nurse
bartender	machine operator	medical secretary	accountant
paper boy	secretary	beautican	judge
delivery boy	sales person	equipment operator	minister
painter's helper	brick layer	carpenter	plant manager
guard	mechanic's helper	electrician	city planner
laundry man	farmer	plumber	engineer
porter	postal worker	butcher	dentist
elevator operator	news reporter	pilot	oceanographer
waitress	cashier	truck driver	biologist

JOBS

minimum education required

H.S. Drop Out	High School	Technical Training	College

Teachers should run off 30 - 50 copies. Students then can write in careers under each classification at random. Then play just like bingo.

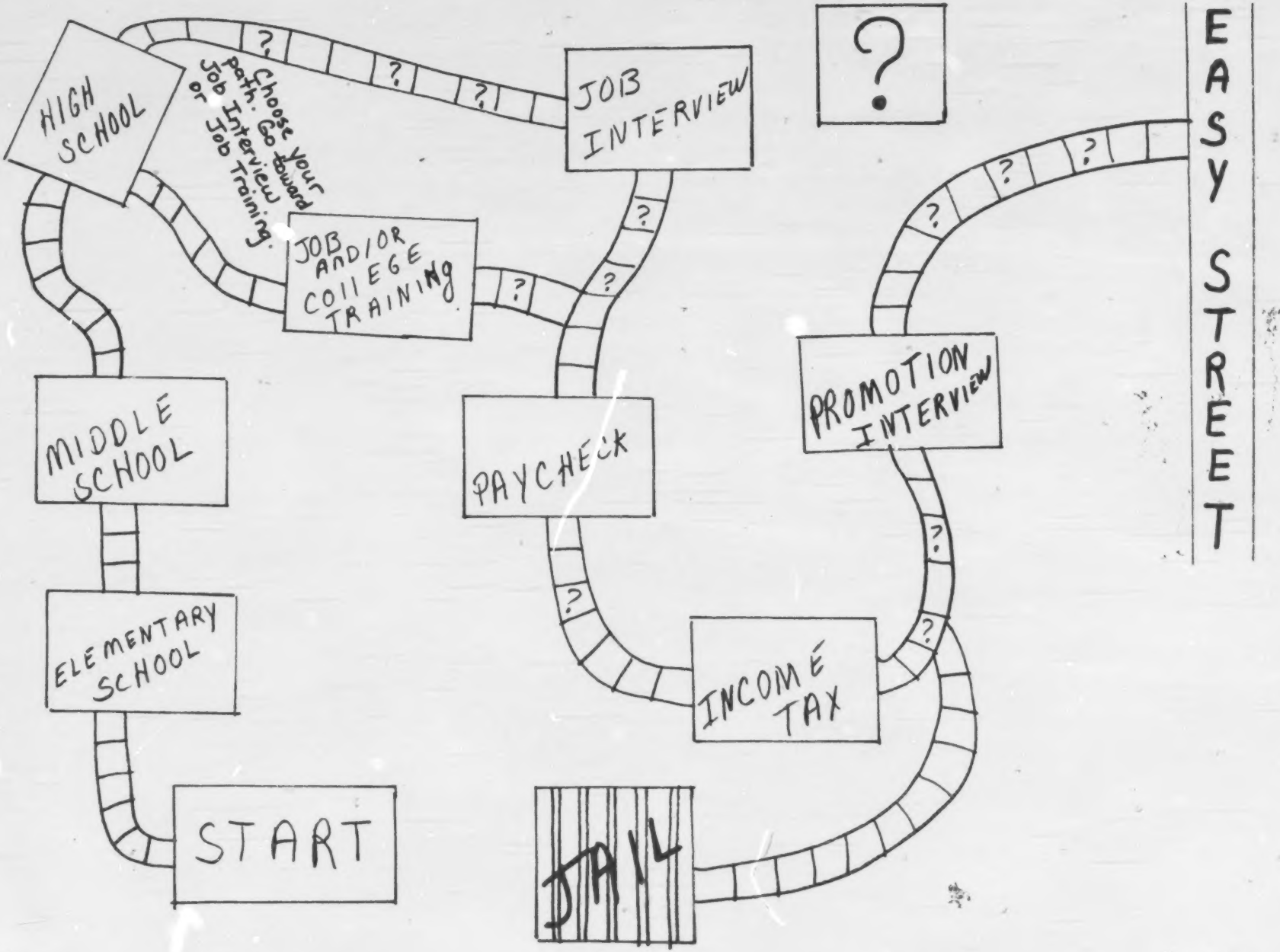
J	O	B	S
Primarily Working with			
Hand	Head	machine	people
plumber	mathematician	truck driver	teacher
carpenter	chemist	machine operator	principal
welder	engineer	heavy equipment operator	stewardess
electrician	architect	sewing machine operator	bus driver
mason	writer	secretary	clergy
painter	accountant	farmer	nurse
toolmaker	doctor	auto mechanic	social worker
tailor	lawyer	computer technician	psychiatrist
seamstress	computer programmer	crane operator	sales clerk
shoemaker	pharmacist	fireman	insurance agent
custodian	veterinarian	well drillers	supervisor
draftsman	detective	printer	telephone operator
jeweler	advertising specialist	photographer	policeman
pilot	bank executive	aviation mechanic	waitress
musician	judge	sawyer	peace corps

JOBS

primarily working with

Hand	Head	machine	people

Teachers should run off 30-50 copies. Students then can write in careers under each classification at random. Then play just like bingo.



TF 74 JBJGMJDLBM 6-26

Rules for "Easy Street" (2 - 6 players)

1. Players select their occupational tokens.
2. Players spin to see who goes first.
3. Players, in turn, spin and advance the number of spaces indicated on the spinner.
4. Players must stop at each cardstop and draw a card. Cards are to be read aloud and answered aloud. Correct answers are found on the backs of the cards. If a player answers correctly, he advances the number of spaces or to the place indicated on the on the back of the card (upper right corner). If he answers incorrectly, he must wait at that stop until his next turn; he draws another card and tries again. Players do not leave card stops until they have answered a question correctly.
5. Players landing on "?" must draw a "?" card and follow the directions.
6. Players landing in jail must spin an even number before leaving.
7. The object of the game is to be the first player to reach Easy Street. Players must spin the exact number of spaces required. The first player to reach Easy Street is the winner.

"Easy Street" Cards

Elementary School

1 7 X 8 56 Right: 1 space	1 8 X 9 72 Right: 1 space
1 10+10+10+10+8+1 47 Right: 1 space	1 12 X 4 48 Right: 1 space
1 (2 X 3) + 2 8 Right: 1 space	1 (25 - 5)+1 21 Right: 1 space
1 8+8+8+8 32 Right: 2 spaces	1 6 X (2 X 3) 36 Right: 2 spaces
1 5 X 5 X 10 250 Right: 3 spaces	1 2 X 3 X 5 X 2 60 Right: 2 spaces
1 (8+2) X (12- 2) 100 Right: 3 spaces	1 (9+1) - (8- 1) 3 Right: 2 spaces

"Easy Street" Cards

Middle School (Junior High)

2 A plumber is trained to: a) repair toys b) repair doors c) repair pipes d) repair plum trees	2 An accountant works with: a) machines b) numbers c) paint d) designs
c) pipes Right: 3 spaces	b) numbers Right: 2 spaces
2 A T.V. repairman must complete: a) college b) high school(only) c) technical training	2 An automobile mechanic works with: a) hammer and wrench b) micrometer and pliers c) gaskets and oils d) all of the above
c) technical Right: 3 sp.	d) all Right: 3 spaces
2 A veterinarian works with a) plants b) people c) animals d) machines	2 Name a career that begins with the letter "C".
c) animals Right: 2 sp.	Right: 3 sp.
2 Name 3 jobs that people perform in a school.	2 An astronomer uses - a) microscope b) telescope
Right: 2 sp.	b) telescope Right: 2 sp.
2 A person who works with electricity is called an _____.	2 Name 2 careers that begin with the letter "T".
electrician Right: 1 sp.	Right: 2 sp.
2 Name 2 careers that require a college education (do not use "teacher").	2 You failed 1 grade. Lose 1 turn.
Right: 2 spaces	

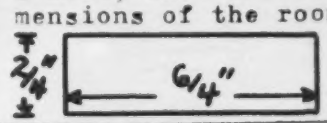
"Easy Street" Cards

High School

3 A doctor must complete: a) 7 years of college b) high school(only) c) technical school	3 If a man bought 3 items at 50 cents and 2 items at 25 cents, how much is the total cost?
a) 7 yrs. Right: 3 sp.	$2.00 Right: 2 sp.
3 How much is 25 dimes?	3 100+1000+1+0
$2.50 Right: 2 sp.	1101 Right: 3 sp.
3 10 X 8 X 4 X 5 X 0	3 (10- 9) X (5- 4)
0 Right: 4 sp.	1 Right: 3 sp.
3 6(8+2)+3	3 Name 1 job that begins with the letter "T".
63 Right: 2 sp.	Right:2 sp.
3 How much is 25 nickels?	3 You dropped out of school. Lose 1 turn.
$1.25 Right: 2 sp.	
3 When you make a mistake in your job, you shoubd: a) get angry b) try not to make the same mistake again c) blame it on someone else	3 After graduating from high school, you probably will: a) not change jobs b) change jobs twice c) change jobs several times
b Right: 2 sp.	c(5-7 times) Right: 4 sp.

"Easy Street" Cards

Job and/or College Training

4 You wish to be a medical technician. A bottle contains 50 mg of a drug. If 32 mg are used, how much of the drug is left?	4 You are a pharmacist. You sell a prescription drug of 60 mg. The patient is to take 6 mg each day. How long will the prescription last?
18 mg Right: 2 sp.	10 days Right: 2 sp.
4 You bought $18.20 of goods. If you gave the cashier a $20 bill, how much change would you get back?	4 If carpeting costs $9.00 per square yard, how much does 10 square yards cost?
$1.80 Right: 2 sp.	$90.00 Right: 4 sp.
4 If you can manufacture a car part in 10 minutes, how many parts can you make in 1 hour?	4 If tile costs 23¢ per square foot, how much does it cost to cover a floor of 1000 square feet?
6 parts Right: 1 sp.	$230 Right: 3 sp.
4 If a college education costs $1500 per year, what is the cost for 4 years?	4 A good medical school will cost $3000 per year. What is the cost for 7 years?
$6000 Right: 2 sp.	$21,000 Right: 3 sp.
4 If you can paint 12 square feet in 1 hour, how many square feet can you paint in 8 hours?	4 You wish to be a draftsman. If ¼ inch is 2 feet, what are the dimensions of the room? 
96 sq.ft. Right: 3 sp.	4 ft., 12 ft. Right: 2 sp
4 Generally speaking, a college graduate will earn more in his lifetime than someone who does not go college. TRUE or FALSE	4 To go to college you need good grades in: a) math b) science c) English d) all of the above
True Right: 2 sp.	d) all Right: 2 sp.

"Easy Street" Cards

Job Interview

5 You are a car salesman. The list price of a car is $3200. If you receive a commission of 10%, how much do you receive?	5 You are a cashier in a store. At 5%, how much sales tax do you charge on a $10,00 item?
$320 Right: 2 sp.	50¢ Right: 2 sp.
A brick mason can lay 50 bricks an hour. If he works 8 hours, how many bricks will he lay?	5 If a plumber earns $7.50 per hour, how much will he earn in an 8-hour day?
400 bricks Right: 2 sp.	$60 Right: 2 sp.
5 You are a policeman investigating an accident. Before stopping, the car skidded 25 yards. How many feet did the car skid?	5 You date the boss' son/daughter. Advance 1 space.
75 feet Right: 2 sp.	
5 You wear blue jeans to an interview. Lose 1 turn.	5 To keep a job it is important to: a) arrive at work on time b) get along well with others c) all of the above
	c) all Right: 2 sp.
5 You completed the application properly. Advance 2 spaces.	5 You answered all of the questions clearly. Advance 2 spaces.
5 If you get two weeks of vacation, how many weeks do you actually work?	5 If you get a $10 a week raise, how much more money is this per year?
50 weeks Right: 3 sp.	$520 Right: 3 sp.

"Easy Street" Cards

Paycheck

6 You work at a piecework rate. If you earn 10¢ per item and if you make 470 pieces, how much will you earn?	6 If you receive a 10¢ per hour raise, how much more money will you earn each 40-hour week?
$47 Right: 1 sp.	$4.00 Right: 3 sp.
6 How much do you earn in a year(52 weeks) if your salary is $115 per week?	6 If you earn $2.50 per hour, how much do you earn in two 40-hour weeks?
$5,980 Right: 4 sp.	$200 Right: 2 sp.
6 Your monthly paycheck is $575. If $125 was withheld in taxes, how much money did you take home?	6 Your hourly wage is $2.00. How much would you make in a 40-hour week?
$450 Right: 2 sp.	$80 Right: 1 sp.
6 If your "bring-home" pay is $150 per week and you save <u>all</u> of it, how long will it be until you have saved $650?	6 Uncle Sam deducts $28 out of your $100 paycheck. How much do you take home?
5 weeks Right: 3 sp.	$72 Right: 1 sp.
6 You will probably work a minimum of 40 years of your lifetime. TRUE or FALSE	6 Most people work: a) 10 hrs. per week b) 25 hrs. per week c) 40 hrs. per week d) 60 hrs. per week
True Right: 1 sp.	c) 40 hrs. Right: 2 sp.
6 If you earn $4.00 per hour, what are your earnings in an 8-hour day?	6 What is your pay for 40 hours if you earn $5.00 per hour?
$32.00 Right: 1 sp.	$200.00 Right: 2 sp.

"Easy Street" Cards

"?" Cards

9 Hard day's work. Advance 1 space.	9 Take a vacation without pay. Move back 2 spaces.
9 You had a good idea. Advance 2 spaces.	9 Late for work. Lose 1 turn.
9 You were caught stealing from the company. Go to jail. When you leave jail, go back to job interview.	9 Pay raise. Advance 3 spaces.
9 Your job has been replaced by a machine. Go back to job training.	9 You have done exceptional work. Move up to next card stop.
9 You were sleeping on the job. Lose 2 turns.	9 On strike. Lose 1 turn.
9 Name 5 jobs in 20 seconds or go back 2 spaces.	9 Name 10 jobs in 30 seconds or go back 1 space.

"Easy Street" Cards

Promotion Interview

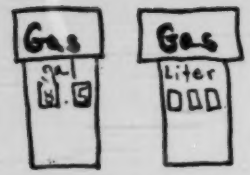
8 A company had an income of $30,000 and expenses of $32,000. Did the company make money or lose money?	8 The electric bill for a company was $200 per month. What was the bill for 1 year?
Lose Right: 1 sp.	$2400 Right: 2 sp.
8 If there were 10 men in your department and each earned $8000 per year, what was last year's payroll?	8 A company had an income of $35,000 and expenses of $35,000. Did the company make a profit?
$80,000 Right: 1 sp.	No Right: 1 sp.
8 Your father bought the business. Advance 3 spaces.	8 Your idea cost the business money. Lose 1 turn.
8 You married the boss' son/daughter. Advance 3 spaces.	8 Invite the boss to dinner. Advance 1 space.
8 A camera salesman makes $10 on each camera he sells. How much does he make by selling 25 cameras?	8 Which is cheaper - a) to rent a machine for $20,000 per year b) to hire 3 men for $7000 per year each
$250 Right: 2 sp.	machine Right: 2 sp.
8 You wreck the company car. Go back 1 space.	8 If your salary is $12,300 per year and you get a $1200 raise, what is your new salary?
	$13,500 Right: 2 sp.

"Easy Street" Cards

Income Tax

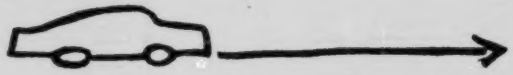
7 The government withheld $2275 of your earnings. Your tax bill is $2116. How much money do you get back as a refund?	7 If $25 out of every $100 you make goes to income taxes, how much will be withheld out of $1000?
7 $159 Right: 2 sp.	7 $250 Right: 4 sp.
7 An accountant will compute your income tax this year. He will charge $3.50 per page of forms. How much willhe charge for 4 forms?	7 Charities are tax-deductible. You gave: $10 - Red Cross $200 - church $5 - Fire company $15 - Boy Scouts How much can you deduct?
$14.00 Right: 2 sp.	$230 Right: 4 sp.
7 The government withheld $1800 from your earnings. Your tax bill is $1980. How much money do you owe?	7 Complete this sentence- One must do two things: die and _____.
$180 Right: 2 sp.	pay taxes Right: 2 sp.
7 You forgot to pay your income tax. Go to jail!	7 The higher a person's income, the more taxes he pays. TRUE or FALSE
	True Right: 1 sp.
7 Most Americans must pay their income taxes by: a) January b) April c) July	7 If you make $100 per week and your "bring-home" pay is $73, how much was deducted for taxes?
April Right: 2 sp.	$27 Right: 3 sp.
7 If you make $2000 per month and your "bring-home" pay is $1600.40, How much was deducted for taxes?	7 A person makes $10,000 per year. His "bring-home" pay is $7200. How much was deducted for taxes in the year?
$399.60 Right: 2 sp.	$2800 Right: 3 sp.

THINK - METRIC

① 

1 l ≈ 1 qt.

② 1 mile = 1.6 k.
0.62 mile = 1 k.



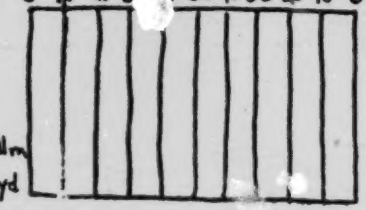
298 miles ____ kilometers

③

62 in. = ___ cm
2.54 cm = 1 in.

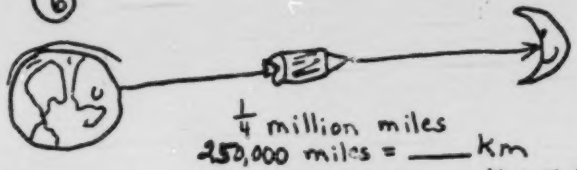
④

1010g = 2.2 lb
1.5 lb. = ___ g

⑤ 

1 yd = 0.9 m
1 m = 1.09 yd

_ _ _ _ _ _ _ _ _ _ m.

⑥ 

¼ million miles
250,000 miles = ___ km
1 mi = 1.61 km 1 km = 0.62 miles

⑦ Challenge
Tire pressure
32 lbs/sq. in.
___ kg/sq. in.
1 kg = 2.2 lbs
1 cm = .39 in

ANSWERS

1. 8.5 gal. = 34 liters
2. 238 miles = 380.8 kilometers
3. 62 in. = 157.48 cm.
4. 1.5 lbs. = 227.2 g.
5. 10 yds 20 yds 30 yd 40 yd 50 yd
   9.1 m 18.2 m 27.3 m 36.4 m 45.5 m
6. 250,000 miles = 402,500 km.
7. 32 lbs = 14.54 kg = 14.54 kg = 2.29 kg
   1 sq. in. 1 sq. in 6.35 sq. cm 1 sq. cm

METRIC

①

89¢ /meter

a) $2.49 / 2.8 meter

b) $.71 / 80 cm

c) $.85 / 9.5 dm

②

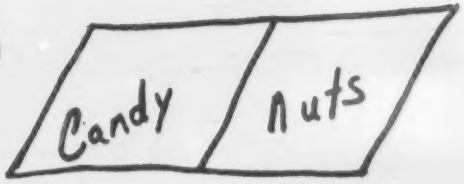
Round steak

$2.78 /Kg

a) $2.23 / 800 g.

b) $3.61 / 1.3 Kg.

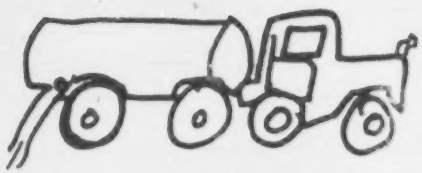
c) $2.11 / 7.6 hg.

③ 

85¢/kg 93¢/Kg

a) 43¢ /500g c) $1.12 /1.2Kg

b) 22¢ /250g d) 47¢ /.5Kg

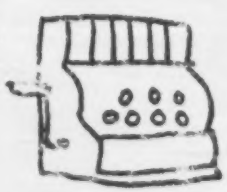
④ 

Gas 8¢/liter

a) $32.00 /4 Kiloliter

b) $1600.00 /20 Kiloliter

MATHEMATICS-CAREERS-TOOLS

A. 

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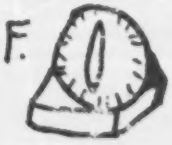
F. 

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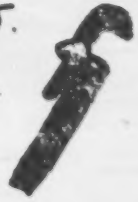
J. 

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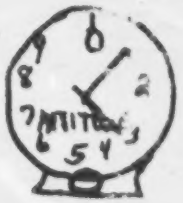
L. 

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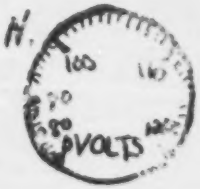
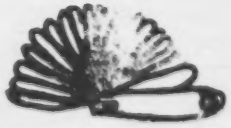
H. 

O 

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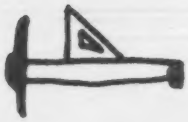
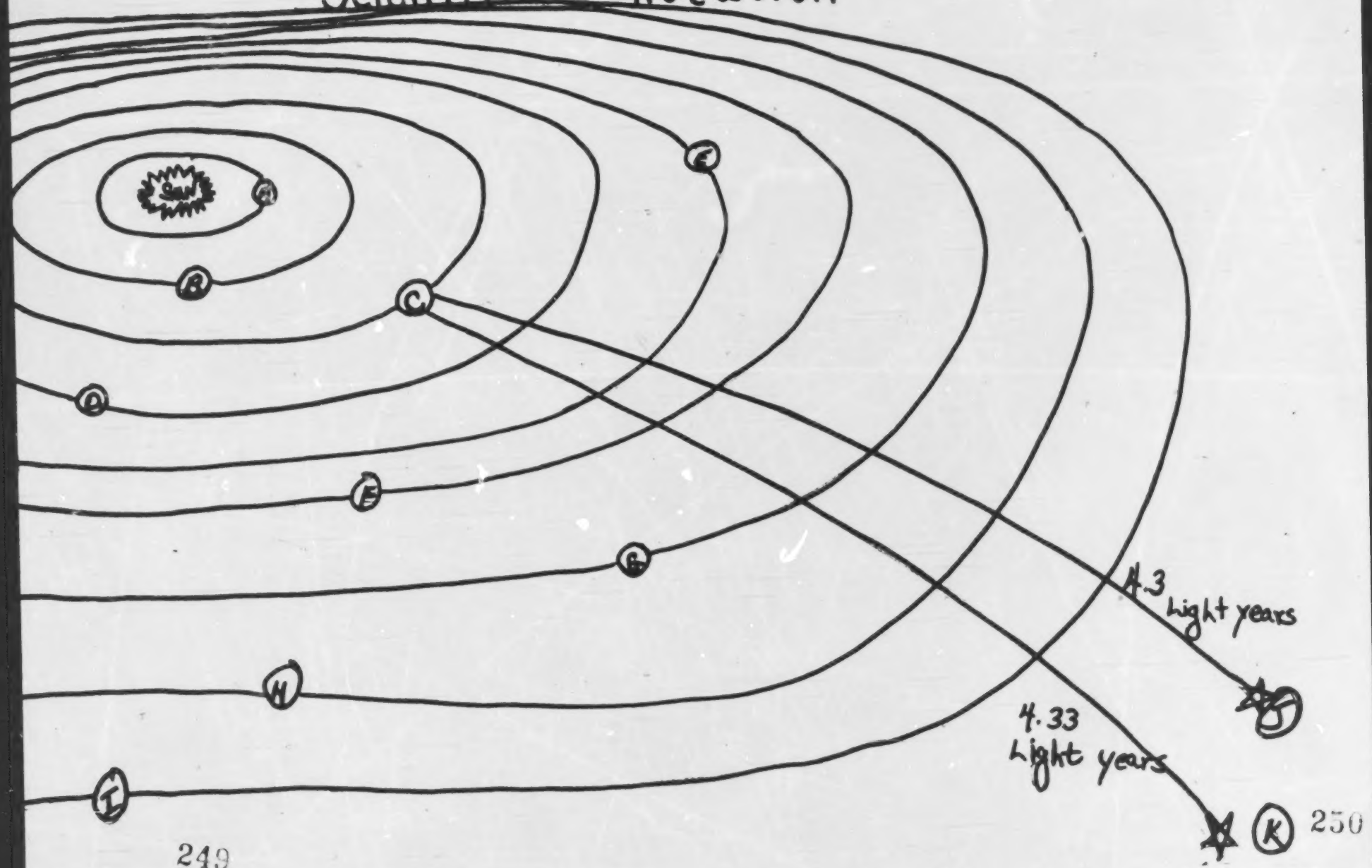


AA

Y.

CAREERS	TOOLS
A. Cashier	A. Cash register
B. Surveyor	B. Transit
C. Cabinet make	C. Rule
D. Carpenter	D. Carpenter's square
E. Meteorologist	E. Hygrometer
F. Chef	F. Timer
G. Mapmaker	G. Protractor
H. Meteorologist	H. Thermometer
I. Payroll clerk	I. Calculator
J. Plumber	J. Wrench
K. Draftsman	K. Compass
L. Pilot	L. Altimeter
M. Carpenter	M. Saw
N. Electrician	N. Voltmeter
O. Automobile mechanic	O. Feeler guage
P. Scale	P. Scale
Q. Fireman	Q. Pressure guage
R. Machinist	R. Micrometer
S. Carpenter	S. Brace
T. Chemist	T. Burette
U. Biologist	U. Microscope
V. Navigator	V. Compass
W. Pharmacist	W. Balance
X. Draftsman	X. T-Square
Y. Meteorologist	Y. Barometer
Z. Commercial fisherman	Z. Depth guage
AA. Physician	AA. Sphygmomanometer (blood pressure)

Scientific Notation



SPACE TRAVEL

Planets and Stars	Miles from Sun	Scientific Notation
A. Mercury	36,000,000	
B. Venus	67,000,000	
C. Earth		9.3×10^7
D. Mars		1.42×10^8
E. Jupiter	483,000,000	
F. Saturn		8.86×10^8
G. Uranus		1.78×10^8
H. Neptune	2,794,000,000	
I. Pluto	3,670,000,000	
J. Proxima Centauri		2.5×10^{13}
K. Alpha Centauri	25, 454,907,598,000	

What types of careers would be associated with scientific notation?

Answer Sheet

A. 3.6×10^7
B. 6.7×10^7
C. 93,000,000
D. 142,000,000
E. 4.83×10^8
F. 886,000,000
G. 1,783,000,000
H. 2.79×10^9
I. 3.67×10^9
J. 25,000,000,000,000,
K. 2.54×10^{13}

Rules for "Success" (4 - 6 players)

1. Each player will select a token and place the token on PAY DAY.

2. A decision must be made as to which player will begin the game.

3. Each player, in turn, will throw the die and advance his token the number of spaces indicated, moving the token clockwise.

4. The game is over when all rating cards have been used. Players should save all rating cards they receive until the end of the game. The points indicated on the rating cards will be totaled along with the money points.

5. The winner of the game is determined by the highest number of rating points. Money collected by each player will be converted into rating points at the end of the game.

6. Each player will calculate his own pay check in the following manner:

   A. Salary Increases, Other Gains, and Deductions should be recorded in the appropriate columns as each move is made. When a player reaches or passes PAY DAY, the player will tabulate his total salary for that week.

   B. Basic Salary begins at $100.00 plus any Increases or Gains. The second week's salary (and all succeeding weeks) should include Increases only for Basic Salary.

EXAMPLE:

(1st week)

Basic Salary	Salary Increases	Other Gains	Deductions	Net Pay
$100.00		$100.00	$5.00 $15.00 $5.00	$175.00

(2nd week)

Basic Salary	Salary Increases	Other Gains	Deductions	Net Pay
$100.00	$15.00	$120.00	$15.00	$220.00

Basic Salary	Salary Increases	Other Gains	Deductions	Net Pay
$115.00		$120.00	$5.00	$230.00

Two weeks' vacation... Collect 2 weeks' pay.	PAY UNION DUES Deduct $15.00	Draw one RATING CARD	Holi with pay. Add one day's pay.	Draw one RATING CARD	Late for Work. You LOSE 1 turn.	You worked OVERTIME. Take an Extra turn.				
Draw one RATING CARD							Your turn to drive the car to work. Pay $20.00 for costs.			
Took an Adult Education Course. Increase Salary...$25							Draw one RATING CARD.			
SICK LEAVE Return to work.	PAY DAY Collect ½ your salary.						FUND DRIVE Deduct $5.00			
Completed 25 years of service. Collect $100.00 Cash Bonus.							Co-worker late for work..... LOSE 1 turn.			
Draw one RATING CARD							PROMOTION..... Increase Salary by $15.00			
Take Business Trip to New York. Collect $120.00 for expenses	PROMOTION..... Increase Salary by $15.00	Savings Bonds Deduction... Deduct $5.00.	Holiday without pay... LOSE 1 turn.	Broke a piece of equipment. Deduct $20.00	Draw one RATING CARD.	(Start Here.) PAY DAY Collect Salary.				

SUCCESS

SUCCESS

PLAYING CARDS

SUCCESS

SUCCESS

For Success Game

RATING CARDS (These can be cut out and glued on cards.)

You use the materials and equipment for your job correctly. This is a good rating.
ADD 2 points.

You observe all safety procedures.
This is a good rating.
ADD 3 points.

You make very few mistakes in your work.
This is a good rating.
ADD 2 points.

Your work meets the standards set by your employer. This is a good rating.
ADD 3 points.

You accept criticisms well.
This is a good rating.
ADD 2 points.

Your work is always completed on time.
This is a good rating.
ADD 5 points.

You keep equipment clean and always report needed repairs. This is a good rating.
ADD 2 points.

You help others when they need your help.
This is a good rating.
ADD 4 points.

You do more work than is expected of you.
This is a good rating.
ADD 4 points

You ask for help when you need it.
This is a good rating.
ADD 3 points.

You try to do your best.
This is a good rating.
ADD 2 points.

You miss very little time from work.
This is a good rating.
ADD 5 points.

You keep trying to learn more about your job. This is a good rating.
ADD 3 points.

You come to work on time.
This is a good rating.
ADD 5 points.

You know something about work done on other jobs. This is a good rating.
ADD 2 points.

You do not waste time.
This is a good rating.
ADD 3 points.

You work until quitting time.
This is a good rating.
ADD 3 points.

You follow basic directions.
This is a good rating.
ADD 4 points.

You take a day off whenever you feel like it.
This is a bad rating.
DEDUCT 4 points.

The work you did yesterday was sloppy.
This is a bad rating.
DEDUCT 4 points.

As a result of being in a bad mood, you disrupted your co-worker. This is a bad rating.
DEDUCT 4 points.

Your personal hygiene is acceptable.
This is a good rating.
ADD 2 points.

After you left, the supervisor found your work area dirty. This is a bad rating.
DEDUCT 2 points.

You did not observe safety procedures.
This is a bad rating.
DEDUCT 5 points.

You took a longer break than you should have taken. This is a bad rating.
DEDUCT 3 points,

You used company time for your personal business.
This is a bad rating.
DEDUCT 2 points.

You were late for work three days last week.
This is a bad rating.
YOU'RE FIRED!
LEAVE THE GAME!

You stole something. YOU'RE FIRED!
LEAVE THE GAME!

You spread gossip among your co-workers.
This is a bad rating.
DEDUCT 2 points.

Your overall appearance is acceptable.
This is a good rating.
ADD 1 point.

You are courteous to your co-workers.
This is a good rating.
ADD 2 points.

You have been taking home small items without permission. This is a bad rating.
DEDUCT 2 points.

You have turned in several good ideas for the suggestion box. This is a good rating.
ADD 2 points.

SUCCESS (4 - 6 players)

Sample Paycheck

Basic Salary	Salary Increases	Other Gains	Deductions	NET PAY

CONVERSION TABLE (game of Success)

$1 to $99.99 - 1 point

$100 to $199.99 - 2 points

$200 to $299.99 - 3 points

$300 to $399.99 - 4 points

$400 to $499.99 - 5 points

$500 to $599.99 - 6 points

$600 to $699.99 - 7 points

$700 to $799.99 - 8 points

$800 to $899.99 - 9 points

$900 to $999.99 - 10 points

$1,000 to $1,999 - 11 points

$2,000 to $2,999 - 12 points

$3,000 to $3,999 - 13 points

$4,000 to $4,999 - 14 points

$5,000 and over - 15 points

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